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Analysis of the Hatchel Site (41BW3) Platform Mound Ceramic Vessels, Vessel Sections, Sherds, Pipes, and Other Clay Artifacts

Timothy K. Perttula

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Analysis of the Hatchel Site (41BW3) Platform Mound Ceramic Vessels, Vessel Sections, Sherds, Pipes, and Other Clay Artifacts

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**Analysis of the Hatchel Site (41BW3) Platform Mound Ceramic Vessels,
Vessel Sections, Sherds, Pipes, and Other Clay Artifacts**

Timothy K. Perttula, with contributions by Leslie L. Bush and David Glen Robinson



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Abstract

The Hatchel site (41BW3) is a major ancestral Nasoni Caddo village and mound center on a natural levee deposit in the floodplain of the Red River in Bowie County, Texas, just a few kilometers west of the Arkansas state line. The site was occupied by the Caddo from at least A.D. 1040 to the late 17th century; the latest temporal estimate is based primarily on the association of the Hatchel platform mound with a mound and *templo* illustrated on a 1691 map drawn of the site during the Teran expedition, and selected decorated sherds and vessels in the uppermost mound zones; there are calibrated radiocarbon dates that extend to A.D. 1660 from other village areas or compounds.

The primary purpose of this study of the ceramic vessels, ceramic vessel sherds, ceramic pipes, and other clay artifacts from the WPA platform mound excavations at the Hatchel site has been to better understand the character of the ceramic artifacts from ancestral Caddo contexts at the site. This analysis is primarily focused on identifying the character of the ceramic tradition in place at the Hatchel site and its platform mound, temporal changes in the manufacture and use of these ceramic artifacts, as well as attributes specific to those artifacts (i.e., the use of pigments, or the use of long-stemmed versus elbow pipes and platform pipes) from sub-mound deposits (Zone K), the first primary platform mound (Zone I and J), and the series of temple mound structures in Zones A-H, the second primary platform mound. The characteristics recognized in the ceramic vessels, vessel sections, and ceramic vessel sherds at the Hatchel mound are also compared to and contrasted with other contemporaneous Red River basin ceramic assemblages, particularly Texarkana and Belcher phase assemblages from sites near to Hatchel, as well as along the Red River in southwestern Arkansas and northwestern Louisiana.

The ceramic assemblage from the Hatchel site platform mound at the Texas Archeological Research Laboratory discussed in this volume includes 18 vessels, 59 partially complete vessel sections, 15,041 ceramic vessel sherds, 45 sherds from elbow, tubular, platform, and long-stemmed pipes, 26 spindle whorls, and 11 ceramic disks. There are also a few pieces of daub and burned clay in the assemblage. The ceramic sherd assemblage includes 9818 plain rim, body, and base sherds, 2507 utility ware rim and body sherds, and 2718 fine ware rim and body sherds. About 89 percent of the sherds in the Hatchel mound excavations are from vessels tempered only with grog (i.e., crushed sherds). There is very little difference in the use of tempers in the plain ware, utility ware, and fine ware vessel sherds in the platform mound deposits, as grog temper is present in between 87.0-90.3 percent of the sherds in the three wares.

The decorated ceramic vessel sherds in and under the Hatchel platform mound can be segregated into four different groups based on zone stratigraphy, estimated temporal differences, and different proportions of specific kinds of utility ware and fine ware sherds in each zone:

- Group I, Zones A-D, ca. A.D. 1600-1691
- Group II, Zones E-F, ca. A.D. 1550-1600
- Group III, Zones G-J and Above Zone K, ca. A.D. 1500-1550, with the rapid construction of the primary platform (zones I-J) at or about A.D. 1500
- Group IV, Zone K and Below Zone K, pre-A.D. 1200

Groups I-III represent Late Caddo period Texarkana ceramic assemblages, and Group IV is part of an Early Caddo period use of the Hatchel site before the eventual establishment of Texarkana phase village areas by ca. A.D. 1450 and the ca. A.D. 1500 construction of the platform mound over the

Zone K archaeological deposits. Although the Early Caddo assemblage is separated in time by ca. 300 years from the beginning of construction and use of the primary platform mound in Zones I and J, nevertheless the primary platform mound was constructed directly atop important ritually used structures in Zone K.

The earliest Caddo component in the platform mound excavations at the Hatchel site is in Zone K, and is best represented by Crockett Curvilinear Incised sherds and one vessel, as well as *var. Graves Chapel* and *var. Haley* long-stemmed Red River pipes. The settlement responsible for the Zone K structures and the ceramic assemblage is estimated to date between ca. A.D. 1040-1200.

Zones G-J (dating ca. A.D. 1500-1550) are characterized by Bassett arrow points, elbow pipes and a platform pipe, a bulbous arrow point form, and a range of fine ware and utility ware vessels and vessel sections. Specific to these zones are vessels of Avery Engraved, *var. Bradshaw*, Bowie Engraved, an appliqued bowl, and a Moore Noded bowl. Other ceramic types that first appear in zones G-J, but are also made and used in later zones, include Simms Engraved, Belcher Engraved, Foster Trailed-Incised, McKinney Plain, and Barkman Engraved.

In Zones E-F (dating ca. A.D. 1550-1600), triangular Maud arrow points began to be manufactured and used by the Nasoni Caddo at the Hatchel site, and continued in use (in Zones A-D) until ca. A.D. 1691. The ceramic vessels and vessel sections specific to Zones E-F are Hatchel Engraved, Keno Trailed, and Foster Trailed-Incised, while Simms Engraved, Avery Engraved, and Barkman Engraved types are shared primarily with the Zone G-J ceramic assemblages.

Zones A-D are the latest structural zones in the Hatchel mound, and they have their own distinctive sets of arrow point (Maud), tubular pipes, and ceramic types in the vessels and vessel sections. The ceramic types in these zones include Cowhide Stamped and Hodges Engraved in Zones A and B, Avery Engraved from Zone D, and Belcher Engraved and Simms Engraved in Zones B and C, respectively. None of the recovered ceramics in Zone A, the latest of the mound zones, are specifically from identified Historic Caddo Red River ceramic types such as Natchitoches Engraved, several varieties of Foster Trailed-Incised, Keno Trailed, and Hodges Engraved, that date from ca. A.D. 1690-1730. This strongly suggests that although the platform mound at the Hatchel site was apparently occupied in 1691 during the time of the Teran expedition to the site, it was abandoned very shortly thereafter, as was much of the Nasoni Caddo community.

Introduction and Purpose of the Study

The Hatchel site (41BW3, once numbered ET-30) is a major ancestral Caddo village and mound center on a natural levee deposit in the floodplain of the Red River in Bowie County, Texas (Figures 1 and 2), just a few kilometers west of the Arkansas state line (Creel 1996). The platform mound and the main part of the associated village overlooks two channel lakes of the river; these likely were

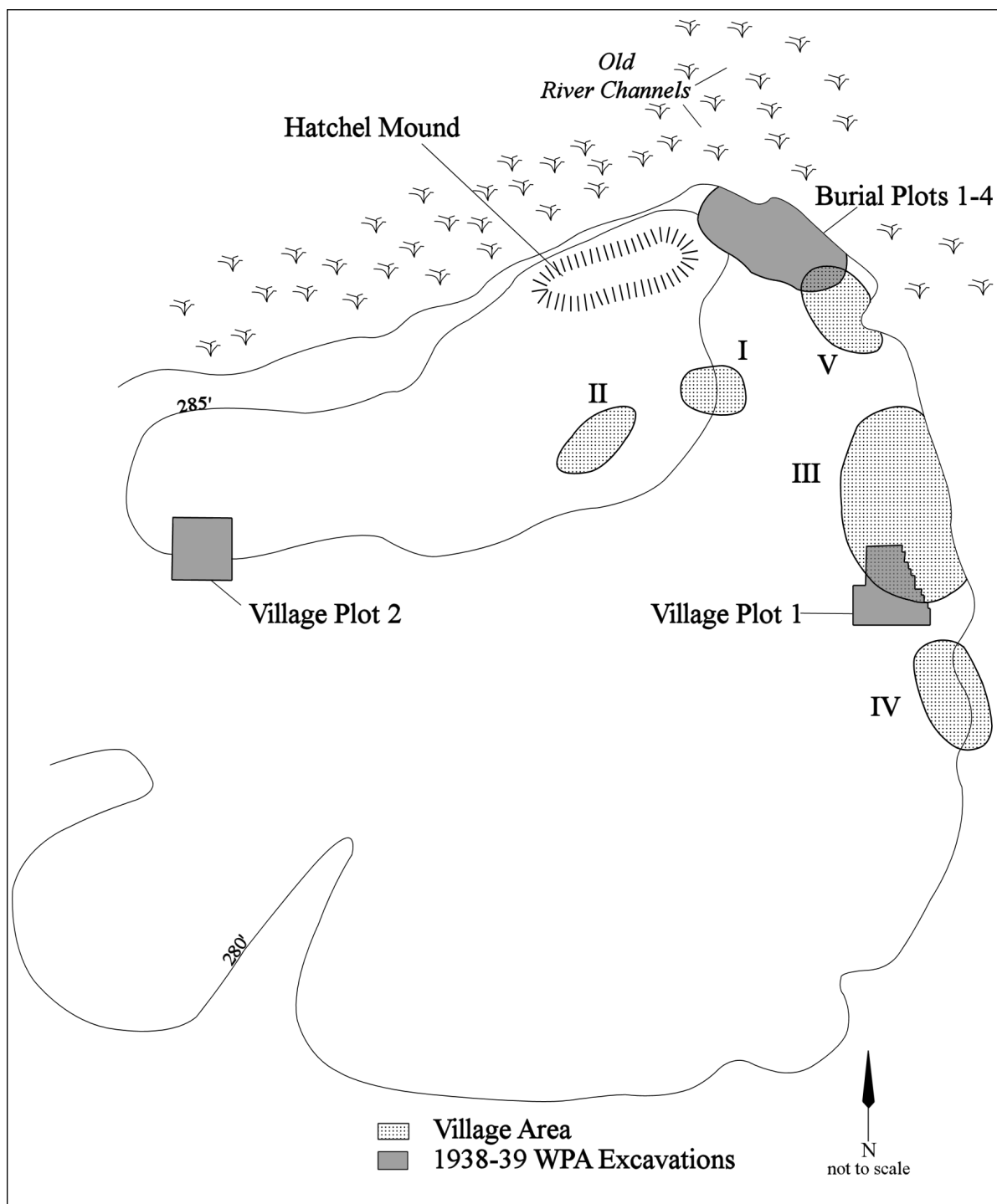


Figure 1. Platform mound, WPA village and burial plots, and Village areas at the Hatchel site.

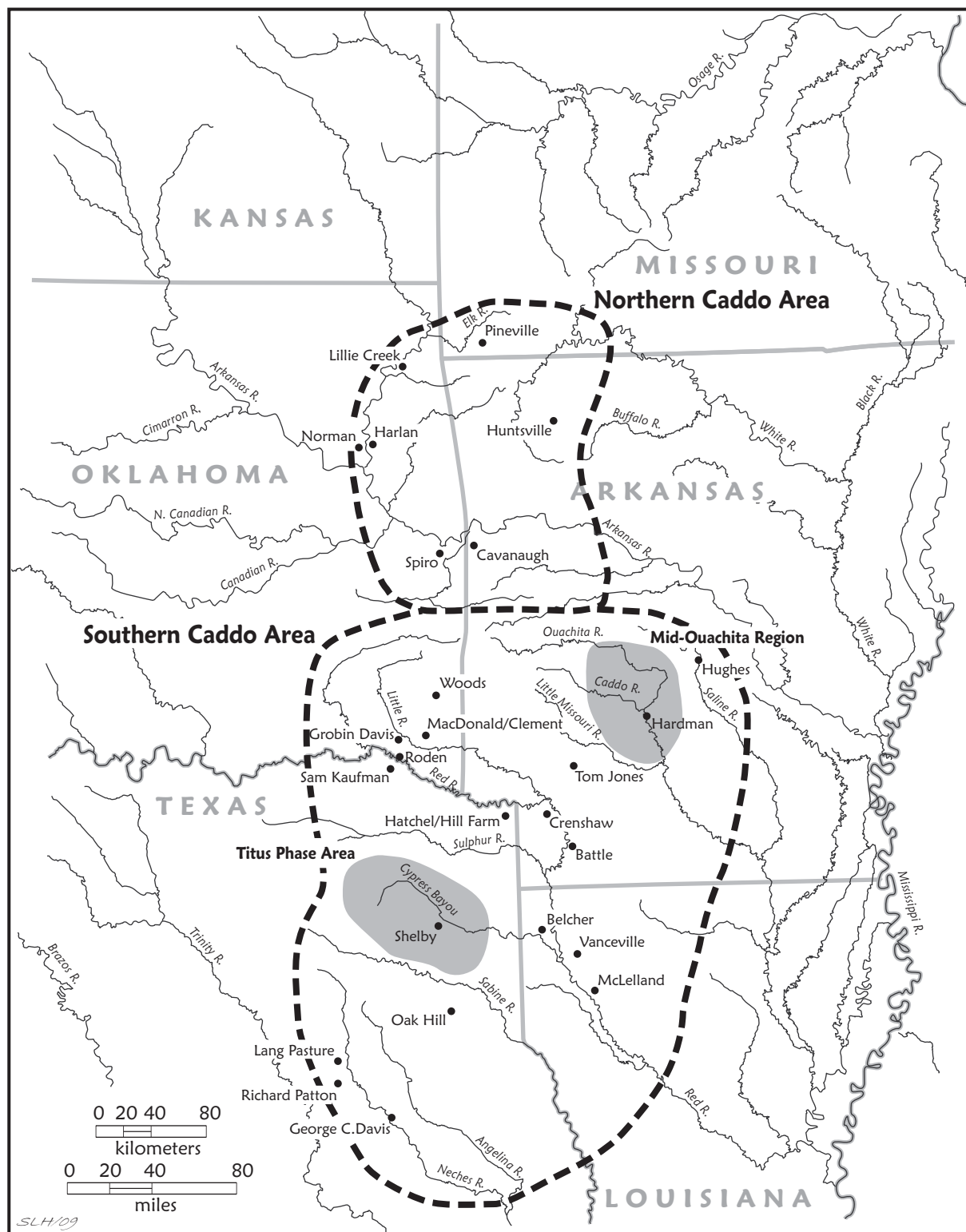


Figure 2. The location of the Hatchel site in the broader Caddo archaeological area.

part of the channel of the river when the site was occupied by the Caddo. The site was occupied by the Caddo from at least A.D. 1040 to the late 17th century. The earliest end of this age range is based on 2-sigma calibrated ages from radiocarbon dates obtained in one of the site's village areas south of

the platform mound (Perttula and Nelson 2003; Perttula 2005a), as well as a few diagnostic ceramic sherds from Early Caddo period (ca. A.D. 900-1200) types, and the latest temporal estimate is based primarily on the association of the Hatchel platform mound with a mound and *templo* illustrated on a 1691 map drawn of the site during the Teran expedition (see Wedel 1978; Sabo 2012), though there are calibrated radiocarbon dates that extend to A.D. 1660 from other village areas (Perttula and Nelson 2003; Perttula 2005a). The platform mound stood at least 25 ft. (7.6 m) in height at the time of the Works Progress Administration (WPA) investigations in 1938-1939.

The primary purpose of this study of the ceramic vessels, ceramic vessel sherds, ceramic pipes, and other clay artifacts from the platform mound excavations at the Hatchel site is to better understand the character of the ceramic artifacts from ancestral Caddo contexts at the site—including the use of different tempers, and the nature of the plain ware, utility ware, and fine ware found there. In particular, this analysis is primarily focused on identifying the character of the ceramic tradition in place at the Hatchel site, temporal changes in the manufacture and use of these ceramic artifacts, as well as attributes specific to those artifacts (i.e., the use of pigments, or the use of long-stemmed versus elbow pipes and platform pipes) from sub-mound deposits (Zone K), the first primary platform mound (Zone I and J), and the series of temple mound structures in Zones A-H, the second primary platform mound. The characteristics recognized in the ceramic vessels, vessel sections, and ceramic vessel sherds at the Hatchel mound are also compared to and contrasted with other contemporaneous Red River basin ceramic assemblages.

Archaeological Context of the Platform Mound

The platform mound at the Hatchel site was constructed in several stages (Figure 3). The first, or principal, platform comprises zones I and J—built atop the level ground surface (Zone K) (Beatty 1939:538) and a large pre-mound circular structure (Feature 25)—and these two platform zones stood 4.2 m in height, with flat tops (Lanning 1968; Perttula 2014a). There was evidence of other structures in Zone K that were marked by post holes about 3 ft. below the ground surface and a large ash deposit ca. 9.2 m in length. Neither of these mound platform zones apparently had structures constructed atop them. Zone J was comprised of red and blue clays and was about 22 m in length

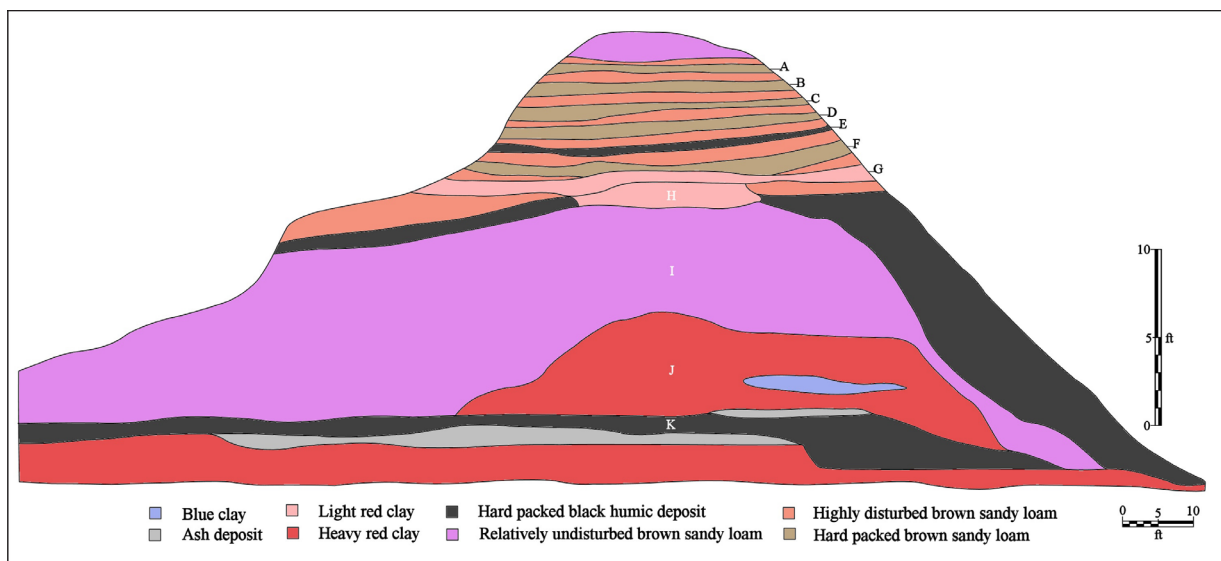


Figure 3. Cross-section of Zones A-K in the platform mound excavations at the Hatchel site.

and 14 m in width, thus rectangular, stood 2.2 m in height, and had steep sides. It contained little in the way of cultural materials. Zone I, on the other hand, was built up from sandy loam deposits—probably scraped up from the surrounding village deposits since no borrow pits have been identified at the site—and it contained an abundance of debris, especially ceramic sherds (Perttula 2014a:Table 1) found within the top 1 ft. of the deposit (Lanning 1968:23). Zone I was piled atop Zone J and extended the mound until it was more than 40 m in length; it also had steep sides. According to Jackson (2004), a ramp was constructed on the south-central side of the mound, leading down to the plaza and village, as part of the primary mound; Krieger (1946:213, fn42) also mentions a clay ramp on the south side of the mound, apparently associated with Zones I and J. Krieger (1946:211) considers each of these zones to represent two superimposed “flat-topped ‘temple’ mounds.”

Subsequently, a second stage of the mound began to be constructed on the northern half of the primary mound platform. This stage, approximately 3.4 m in height and ca. 30 m in length, is comprised of eight stratified zones (A-H) (see Figure 3) with structures and other features. Each zone was subsequently buried by sandy loam and/or clay mound fill deposits. While Krieger (1946:211) considered these mound deposits and burned structure zones to be “a huge mantle of midden refuse not intentionally built up,” it is clear that the mound zones represent the repeated construction and destruction of important structures that were built atop mound fill zones covering earlier structures and their associated debris. In a number of cases, the structures in different mound zones were built exactly atop or directly above those from a lower zone; the zones were generally 1 ft. apart. In Zone H, the pivotal Feature 18 was covered by a small mound, and this structure overlay Features 16 and 17 in Zone H. A male adult bald eagle had been buried in a pit (Feature 23) associated with Feature 18 (Perttula 2016a:97), and it is likely that the bald eagle remains were the product of the use of captured eagles as sacra in feasting and ritual or religious ceremonies conducted by the Caddo religious and political elite. According to Spock (1972), bones of a second but immature bald eagle were recovered in the sediments that covered the adult male bald eagle, and likely relate to a second burial. A bone from a passenger pigeon, an extinct species, also was found in Zone H; “passenger pigeon bones tend to occur in ritual and/or elite contexts on Caddo sites” (Perttula et al. 2014:39). Features 19-20 were apparently later temple structures built in Zone H, perhaps contemporaneous with or slightly later than Feature 18.

Zone A was capped with about 1 ft. of brown sandy loam and habitation debris. There were large areas of daub associated with Features 1 and 3 in this zone, the daub covering 4.5 x 2.5 ft. and 5.3 x 1 ft. No daub concentrations were noted in Zone B, though the structures were burned, but Zone C, Feature 7, had a 8.1 x 3.2 ft. daub concentration, primarily associated with the entranceway, suggesting the roof of the entranceway had been clay plastered.

Ceramic Vessels from Platform Mound Features

In the discussions that follow of the ceramic artifacts recovered in the WPA excavations at the Hatchel site platform mound, I begin with the ceramic vessels. With the exception of one vessel from sub-mound Zone K, the remainder of the ceramic vessels from the platform mound are from the second stage of primary mound construction and zones D-H. This includes one vessel from a Zone D feature, three vessels in Zone E, six vessels in Zone F, three vessels in Zone H, one vessel in what was labeled by the WPA as under or below Zone H, and one vessel in Zone K, the occupational deposit beneath the platform mound. There are also three ceramic vessels from Burial 4, a feature that was excavated into the side of the completed mound, and likely dates to the very latest period of use of the platform mound (Beatty 1939:379; see also Perttula 2015a).

Zone D

VESSEL NO.: 6-3-188; Feature 12 in Zone D in the platform mound

VESSEL FORM: Jar

NON-PLASTICS AND PASTE: shell

RIM AND LIP FORM: Everted rim and rounded lip

CORE COLOR: B (fired and cooled in a reducing environment)

INTERIOR SURFACE COLOR: black

EXTERIOR SURFACE COLOR: black;
fire clouds on the body

WALL THICKNESS (IN MM): rim, 3.8
mm

INTERIOR SURFACE TREATMENT:
burnished on the rim, smoothed on the
body

EXTERIOR SURFACE TREATMENT:
burnished

HEIGHT (IN CM): 9.5

ORIFICE DIAMETER (IN CM): 14.0

DIAMETER AT BOTTOM OF RIM OR
NECK (IN CM): 10.8

BASE DIAMETER (IN CM) AND
SHAPE OF BASE: 4.3; circular and
rounded

ESTIMATED VOLUME (IN LITERS): 0.8

DECORATION (INCLUDING MOTIF AND ELEMENTS WHEN APPARENT): The rim and body of the vessel have different engraved motifs that are repeated four times around the vessel (Figure 4a-b). The rim has concentric semi-circles or narrow semi-circular zones filled with hatched lines; the central semi-circular line has small downward-pointing tick marks. The repeating motif on the rim is divided by diagonal engraved lines with tick marks on either side of the semi-circular elements as well as a large cross-hatched pendant triangle and a vertical line that begins at the apex of the triangle element (Figure 4a-b).

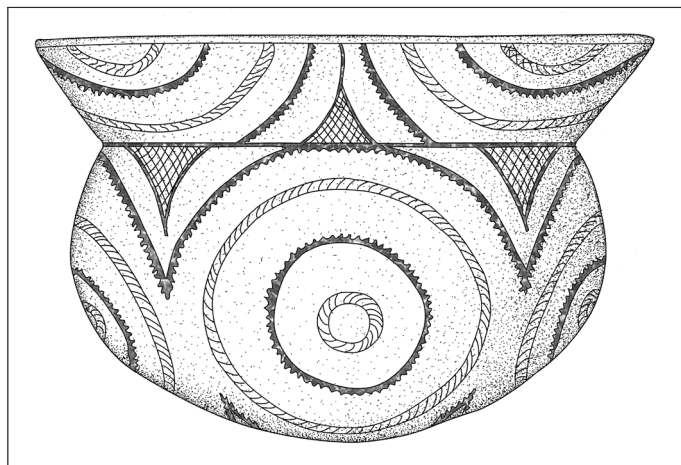


Figure 4. Black Avery Engraved jar (6-3-188) from Feature 12 in Zone D of the platform mound: a, photograph; b, redrawn from Laughlin (1940). Photograph courtesy of TARL.

6 *Analysis of the Hatchel Site (41BW3) Platform Mound*

The vessel body has four repeating sets of concentric circles or narrow circular zones that are either plain or filled with hatched lines (Figure 4a-b); the circular line has tick marks. Surrounding the circular elements are upper and lower semi-circular lines with tick marks as well as upper and lower cross-hatched engraved triangle elements.

PIGMENT USE AND LOCATION ON VESSEL: red pigment in engraved lines

TYPE AND VARIETY (IF KNOWN): Avery Engraved

Zone E

VESSEL NO.: 6-3-189, Burial 1 in Zone E in the platform mound

VESSEL FORM: Jar

NON-PLASTICS AND PASTE: grog

RIM AND LIP FORM: Direct rim and rounded lip

CORE COLOR: F (fired in a reducing environment and cooled in the open air)

INTERIOR SURFACE COLOR: reddish-brown

EXTERIOR SURFACE COLOR: dark yellowish-brown; fire clouds on the rim and body

WALL THICKNESS (IN MM): rim, 6.1 mm

INTERIOR SURFACE TREATMENT: smoothed

EXTERIOR SURFACE TREATMENT: smoothed on the body

HEIGHT (IN CM): 11.5

ORIFICE DIAMETER (IN CM): 12.2

DIAMETER AT BOTTOM OF RIM OR NECK (IN CM): 12.0

BASE DIAMETER (IN CM) AND SHAPE OF BASE: 5.3; circular and flat

ESTIMATED VOLUME (IN LITERS): 0.84

DECORATION (INCLUDING MOTIF AND ELEMENTS WHEN APPARENT): The rim has three horizontal trailed panels filled with closely-spaced incised lines pitched in opposing directions (Figures 5 and 6c).

PIGMENT USE AND LOCATION ON VESSEL: none

TYPE AND VARIETY (IF KNOWN): Foster Trailed-Incised, *var. unspecified*. Foster

Trailed-Incised is a widely distributed Late Caddo period utility ware, found in sites in the Ouachita and Red River basin and in other parts of the southern Caddo area (McKinnon 2011:Figures 5 and 8)

VESSEL NO.: 6-3-190, Burial 1 in Zone E in the platform mound

VESSEL FORM: Jar

NON-PLASTICS AND PASTE: grog

RIM AND LIP FORM: Everted rim and rounded lip

CORE COLOR: B (fired and cooled in a reducing environment)

INTERIOR SURFACE COLOR: black

EXTERIOR SURFACE COLOR: black

WALL THICKNESS (IN MM): rim, 3.9 mm

INTERIOR SURFACE TREATMENT: smoothed

EXTERIOR SURFACE TREATMENT: burnished

HEIGHT (IN CM): 7.6

ORIFICE DIAMETER (IN CM): 11.5

DIAMETER AT BOTTOM OF RIM OR NECK (IN CM): 7.1

BASE DIAMETER (IN CM) AND SHAPE OF BASE: 2.0 cm; circular and rounded

ESTIMATED VOLUME (IN LITERS): 0.53



Figure 5. Foster Trailed-Incised jar (6-3-189) in Burial 1 in Zone E in the platform mound at the Hatchel site. Photograph courtesy of TARL.

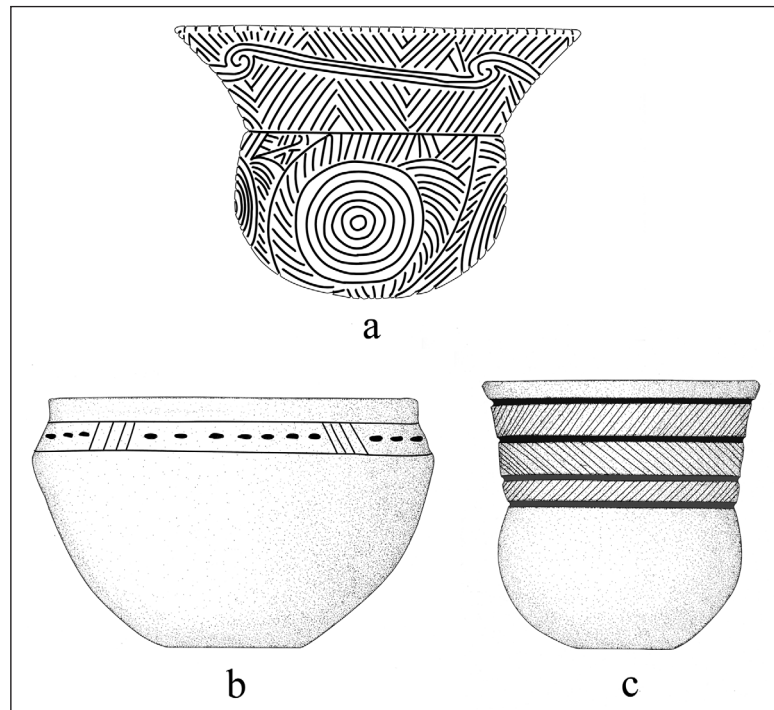


Figure 6. Drawings of vessels from Zone E, including Burial 1: a, Keno Trailed jar; b, Simms Engraved carinated bowl; c, Foster Trailed-Incised, *var. unspecified* jar. Redrawn from Laughlin (1940).

DECORATION (INCLUDING MOTIF AND ELEMENTS WHEN APPARENT):

This vessel is decorated with trailed lines on the rim, body, and base (Figure 7; see also Figure 6a). The rim of the vessel has a set of three closely-spaced continuous meandering scroll elements at the mid-rim, with upper and lower sets of opposed and diagonal opposed trailed lines. The vessel body has four concentric trailed circles divided by diagonal and triangular-shaped areas filled with trailed lines. The vessel is also lip notched (Figure 7).

PIGMENT USE AND LOCATION ON VESSEL: none

TYPE AND VARIETY (IF KNOWN):
Keno Trailed

VESSEL NO.: 6-3-191, Feature 14 in Zone E in the platform mound

VESSEL FORM: Carinated bowl

NON-PLASTICS AND PASTE: grog

RIM AND LIP FORM: Inverted-direct rim and rounded lip

CORE COLOR: G (fired in a reducing environment)

INTERIOR SURFACE COLOR: very dark gray; fire clouds on the rim

EXTERIOR SURFACE COLOR: yellowish-brown; fire clouds on the rim, body, and base

WALL THICKNESS (IN MM): rim, 4.6 mm

INTERIOR SURFACE TREATMENT: smoothed

EXTERIOR SURFACE TREATMENT: smoothed

HEIGHT (IN CM): 10.8

ORIFICE DIAMETER (IN CM): 14.6

DIAMETER AT BOTTOM OF RIM OR NECK (IN CM): 15.3



Figure 7. Keno Trailed jar (6-3-190) in Burial 1 in Zone E in the platform mound at the Hatchel site. Photograph courtesy of TARL.

BASE DIAMETER (IN CM) AND
SHAPE OF BASE: 6.8 cm; circular and
flat

ESTIMATED VOLUME (IN LITERS):
0.95

DECORATION (INCLUDING MOTIF
AND ELEMENTS WHEN APPARENT):
The rim has four engraved panels divided
by sets of four vertical to near-vertical
engraved lines (Figure 8; see also Figure
6b). Each panel has a single horizontal
row of excised punctations.

PIGMENT USE AND LOCATION ON
VESSEL: none

TYPE AND VARIETY (IF KNOWN):
Simms Engraved



Figure 8. Simms Engraved carinated bowl (6-3-191) from Feature 14 in Zone E of the platform mound at the Hatchel site. Photograph courtesy of TARL.

Zone F

VESSEL NO.: 6-3-193; Zone F in the platform mound

VESSEL FORM: Carinated bowl

NON-PLASTICS AND PASTE: grog

RIM AND LIP FORM: Inverted rim and rounded lip

CORE COLOR: G (fired in a reducing environment and cooled in the open air)

INTERIOR SURFACE COLOR: black

EXTERIOR SURFACE COLOR: dark yellowish-brown; fire clouds on the rim, body, and base

WALL THICKNESS (IN MM): rim, 4.5 mm

INTERIOR SURFACE TREATMENT: smoothed

EXTERIOR SURFACE TREATMENT: burnished

HEIGHT (IN CM): 4.1

ORIFICE DIAMETER (IN CM): 7.0

DIAMETER AT BOTTOM OF RIM OR NECK (IN CM): 8.1

BASE DIAMETER (IN CM) AND
SHAPE OF BASE: 2.0; circular and flat

ESTIMATED VOLUME (IN LITERS):
0.17

DECORATION (INCLUDING MOTIF
AND ELEMENTS WHEN APPARENT):
Plain (Figure 9a-b)

PIGMENT USE AND LOCATION ON
VESSEL: none

TYPE AND VARIETY (IF KNOWN):
Unidentified plain ware

VESSEL NO.: 6-3-194, Burial 2 in Zone F
in the platform mound

VESSEL FORM: Carinated bowl

NON-PLASTICS AND PASTE: grog and
bone

RIM AND LIP FORM: Direct rim and
rounded lip

CORE COLOR: B (fired and cooled in a
reducing environment)

INTERIOR SURFACE COLOR: black

EXTERIOR SURFACE COLOR: very
dark grayish-brown; fire clouds on the
body

WALL THICKNESS (IN MM): rim, 4.7 mm

INTERIOR SURFACE TREATMENT: burnished

EXTERIOR SURFACE TREATMENT: burnished

HEIGHT (IN CM): 7.6

ORIFICE DIAMETER (IN CM): 15.3

DIAMETER AT BOTTOM OF RIM OR NECK (IN CM): 15.3

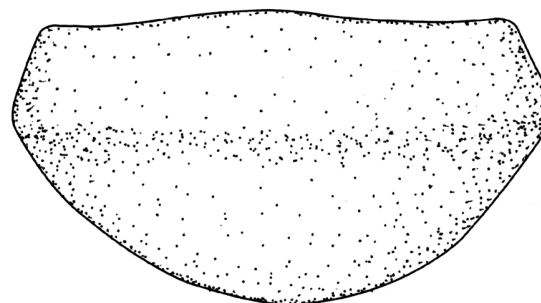


Figure 9. Plain carinated bowl (6-3-193) from Zone F in the platform mound at the Hatchel site: a, photograph; b, drawing, redrawn from Laughlin (1940). Photograph courtesy of TARL.

BASE DIAMETER (IN CM) AND SHAPE OF BASE: 6.4 cm; circular and rounded

ESTIMATED VOLUME (IN LITERS): 0.70

DECORATION (INCLUDING MOTIF AND ELEMENTS WHEN APPARENT): The rim has an engraved motif repeated four times around the vessel; above the motif are two horizontal engraved lines (Figure 10a-b). The engraved motif consists of a panel with an enclosed horizontal and vertical scroll line with downward-pointing excised tick marks; the upper and lower panel lines also have excised tick marks. On either side of the scroll line are single vertical engraved lines with excised tick marks as well as narrow vertical columns filled with diagonal hatched lines (Figure 10a-b).

PIGMENT USE AND LOCATION ON VESSEL: white pigment in the engraved lines

TYPE AND VARIETY (IF KNOWN): Barkman Engraved

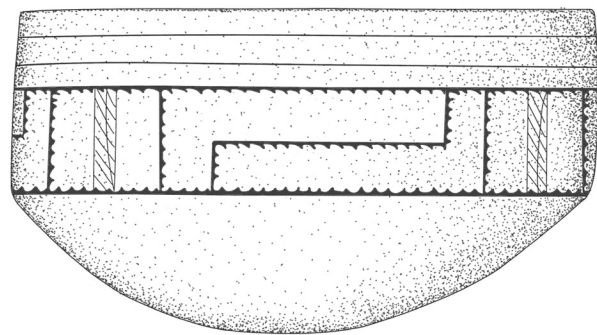


Figure 10. Barkman Engraved carinated bowl (6-3-194) in Burial 2, Zone F, in the platform mound at the Hatchel site: a, photograph, courtesy of TARL; b, drawing; redrawn from Laughlin (1940).

VESSEL NO.: 6-3-195; Burial 2 in Zone F in the platform mound

VESSEL FORM: Jar

NON-PLASTICS AND PASTE: grog

RIM AND LIP FORM: Everted rim and rounded lip

CORE COLOR: H (fired in a reducing environment and cooled in the open air)

INTERIOR SURFACE COLOR: dark yellowish-brown; fire clouds on the rim, body, and base

EXTERIOR SURFACE COLOR: dark grayish-brown; fire clouds on the rim and body

WALL THICKNESS (IN MM): rim, 5.2 mm

INTERIOR SURFACE TREATMENT: smoothed on the rim

EXTERIOR SURFACE TREATMENT:
burnished on the body

HEIGHT (IN CM): 11.6

ORIFICE DIAMETER (IN CM): 13.3

DIAMETER AT BOTTOM OF RIM OR
NECK (IN CM): 12.9

BASE DIAMETER (IN CM) AND
SHAPE OF BASE: 6.4 cm; circular and
flat

ESTIMATED VOLUME (IN LITERS):
0.92

DECORATION (INCLUDING MOTIF
AND ELEMENTS WHEN APPARENT):
The rim is divided into two horizontal
panels by widely-spaced horizontal trailed
lines. The panels are filled with close-
ly-spaced diagonal incised lines pitched
in opposite directions (Figure 11a-b). The
vessel mid-body has four widely-spaced
applied nodes; the nodes are 14 mm in
diameter.

PIGMENT USE AND LOCATION ON
VESSEL: none

TYPE AND VARIETY (IF KNOWN):
Foster Trailed-Incised, *var. Foster* (see
Schambach and Miller 1984:121)

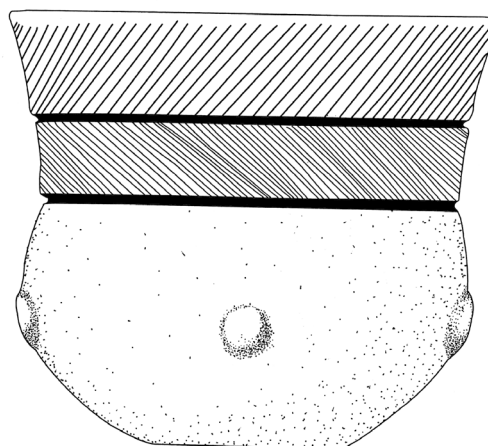


Figure 11. Foster Trailed-Incised, *var. Foster* jar (6-3-195) in Burial 2 in Zone F of the platform mound at the Hatchel site: a, photograph, courtesy of TARL; b, drawing, redrawn from Laughlin (1940).

VESSEL NO.: 6-3-196; Burial 2 in Zone F in the platform mound

VESSEL FORM: Jar

NON-PLASTICS AND PASTE: grog

RIM AND LIP FORM: Everted rim and rounded lip

CORE COLOR: G (fired in a reducing environment and cooled in the open air)

INTERIOR SURFACE COLOR: very dark grayish-brown; fire clouds on the base

EXTERIOR SURFACE COLOR: dark yellowish-brown; fire clouds on the rim and body

WALL THICKNESS (IN MM): rim, 4.9 mm

INTERIOR SURFACE TREATMENT: smoothed

EXTERIOR SURFACE TREATMENT: none

HEIGHT (IN CM): 14.0

ORIFICE DIAMETER (IN CM): 15.2

DIAMETER AT BOTTOM OF RIM OR NECK (IN CM): 14.8

BASE DIAMETER (IN CM) AND SHAPE OF BASE: 7.0 cm; circular and flat

ESTIMATED VOLUME (IN LITERS): 1.3

DECORATION (INCLUDING MOTIF AND ELEMENTS WHEN APPARENT):

The rim is divided into three horizontal panels by trailed lines; the panels are filled with diagonal incised lines pitched in the same direction (Figure 12a-b). The vessel body has four repeated concentric trailed circles around small appliqued nodes. Dividing the concentric circles are upper and/or lower sets of diagonal and curvilinear lines forming triangular areas (Figure 12a-b).

PIGMENT USE AND LOCATION ON VESSEL: none

TYPE AND VARIETY (IF KNOWN): Foster Trailed-Incised, *var. Red Lake* (Schambach and Miller 1984:121 and Figure 11-10)

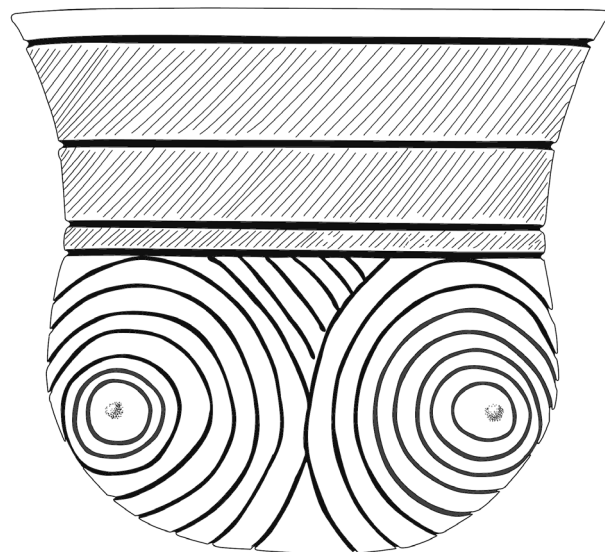


Figure 12. Foster Trailed-Incised, *var. Red Lake* jar (6-3-196) in Burial 2 in Zone F in the platform mound at the Hatchel site: a, photograph, courtesy of TARL; b, drawing, redrawn from Laughlin (1940).

VESSEL NO.: 6-3-197; Zone F in the platform mound

VESSEL FORM: Carinated bowl

NON-PLASTICS AND PASTE: grog

RIM AND LIP FORM: Inverted rim and rounded lip

CORE COLOR: B (fired and cooled in a reducing environment)

INTERIOR SURFACE COLOR: very dark grayish-brown

EXTERIOR SURFACE COLOR: very dark grayish-brown; fire clouds on the body

WALL THICKNESS (IN MM): rim, 4.3 mm

INTERIOR SURFACE TREATMENT: burnished

EXTERIOR SURFACE TREATMENT: burnished

HEIGHT (IN CM): 7.0

ORIFICE DIAMETER (IN CM): 15.8

DIAMETER AT BOTTOM OF RIM OR NECK (IN CM): 16.2

BASE DIAMETER (IN CM) AND SHAPE OF BASE: 4.4 cm; circular and rounded

ESTIMATED VOLUME (IN LITERS): 0.66

DECORATION (INCLUDING MOTIF AND ELEMENTS WHEN APPARENT): The rim has a single horizontal engraved panel defined by single upper and lower horizontal engraved lines with upward- or downward-pointing excised tick marks (Figure 13a-b). The panel itself is divided into four sections by sets of four vertical engraved lines.

PIGMENT USE AND LOCATION ON VESSEL: none

TYPE AND VARIETY (IF KNOWN): Simms Engraved

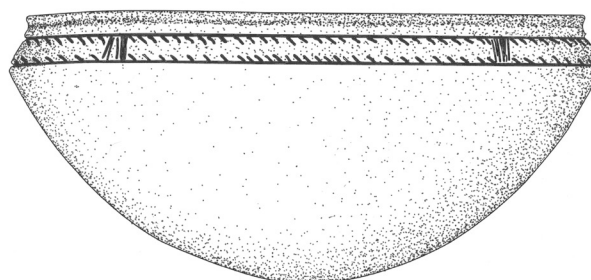


Figure 13. Simms Engraved carinated bowl (6-3-197) in Zone F of the platform mound at the Hatchel site: a, photograph, courtesy TARL; b, drawing, redrawn from Laughlin (1940).

VESSEL NO.: 6-3-198; Zone F in the platform mound

VESSEL FORM: Jar

NON-PLASTICS AND PASTE: grog

RIM AND LIP FORM: Everted rim and rounded lip

CORE COLOR: B (fired and cooled in a reducing environment)

INTERIOR SURFACE COLOR: very dark grayish-brown

EXTERIOR SURFACE COLOR: very dark grayish-brown; fire clouds on the body

WALL THICKNESS (IN MM): rim, 5.1 mm

INTERIOR SURFACE TREATMENT: smoothed

EXTERIOR SURFACE TREATMENT: smoothed on the lowermost body

HEIGHT (IN CM): 16.5

ORIFICE DIAMETER (IN CM): 10.8

DIAMETER AT BOTTOM OF RIM OR NECK (IN CM): 10.0

BASE DIAMETER (IN CM) AND SHAPE OF BASE: 5.1 cm; circular and flat

ESTIMATED VOLUME (IN LITERS): 1.5

DECORATION (INCLUDING MOTIF AND ELEMENTS WHEN APPARENT):

The vessel rim is decorated with closely-spaced diagonal incised lines pitched from right to left (Figure 14a-b). The vessel body has closely-spaced vertical incised lines that extend from the rim-body juncture to just above the vessel base.

PIGMENT USE AND LOCATION ON VESSEL: none

TYPE AND VARIETY (IF KNOWN): Karnack Brushed-Incised

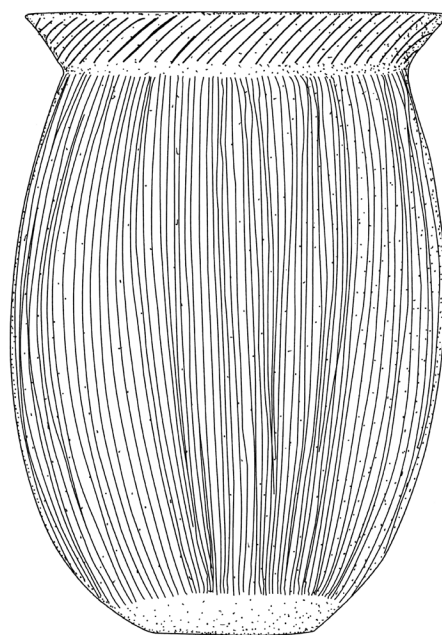


Figure 14. Karnack Brushed-Incised jar (6-3-198) in Zone F of the platform mound at the Hatchel site: a, photograph, courtesy TARL; b, drawing, redrawn from Laughlin (1940).

Zone H

VESSEL NO.: 6-3-200; Burial 3 in Zone H in the platform mound

VESSEL FORM: Compound bowl

NON-PLASTICS AND PASTE: grog

RIM AND LIP FORM: Everted rim and rounded lip

CORE COLOR: A (fired and cooled in an oxidizing environment)

INTERIOR SURFACE COLOR: red

EXTERIOR SURFACE COLOR: red; fire clouds on the base

WALL THICKNESS (IN MM): rim, 5.1 mm

INTERIOR SURFACE TREATMENT: smoothed

EXTERIOR SURFACE TREATMENT: burnished

HEIGHT (IN CM): 15.8

ORIFICE DIAMETER (IN CM): 20.4

DIAMETER AT BOTTOM OF RIM OR NECK (IN CM): 20.2

BASE DIAMETER (IN CM) AND SHAPE
OF BASE: 8.0 cm; circular and flat

ESTIMATED VOLUME (IN LITERS): 2.6

DECORATION (INCLUDING MOTIF AND ELEMENTS WHEN APPARENT): The vessel has a red slip on both interior and exterior vessel surfaces. On the upper panel on the exterior surface, the vessel is decorated with three widely-spaced horizontal engraved lines (Figures 15 and 16a). On the lower panel are four repeated sets of three concentric engraved semi-circles; the central concentric engraved line has dashed or spurred lines. The concentric semi-circle elements are divided by engraved brackets filled with diagonal lines, diagonal lines within triangular elements, and sets of concentric curvilinear engraved lines (Figures 15 and 16a).



Figure 15. Avery Engraved, var. *Bradshaw* compound bowl (6-3-200) from Burial 3 in Zone H of the platform mound at the Hatchel site. Photograph courtesy of TARL.

PIGMENT USE AND LOCATION ON VESSEL: white pigment in the engraved designs

TYPE AND VARIETY (IF KNOWN): Avery Engraved, *var. Bradshaw* (see Schambach and Miller 1984:119)

VESSEL NO.: 6-3-201; Burial 3 in Zone H of the platform mound

VESSEL FORM: Jar with four small rim peaks or lip tabs (Figure 17; see also Figure 16b)

NON-PLASTICS AND PASTE: grog

RIM AND LIP FORM: Everted rim and rounded lip

CORE COLOR: F (fired in a reducing environment and cooled in the open air)

INTERIOR SURFACE COLOR: reddish-brown; fire clouds on the rim and body

EXTERIOR SURFACE COLOR: reddish-brown; fire clouds on the rim, body, and base

WALL THICKNESS (IN MM): rim, 5.8 mm

INTERIOR SURFACE TREATMENT: smoothed

EXTERIOR SURFACE TREATMENT: smoothed on the body

HEIGHT (IN CM): 20.5

ORIFICE DIAMETER (IN CM): 15.2

DIAMETER AT BOTTOM OF RIM OR NECK (IN CM): 14.6

BASE DIAMETER (IN CM) AND SHAPE OF BASE: 8.0 cm; circular and flat

ESTIMATED VOLUME (IN LITERS): 2.8

DECORATION (INCLUDING MOTIF AND ELEMENTS WHEN APPARENT): The vessel rim has

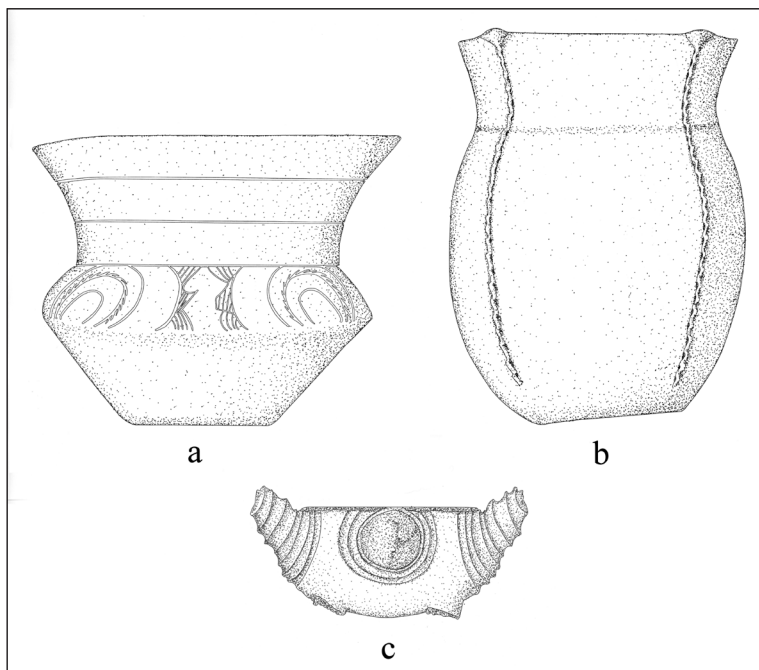


Figure 16. Vessels from Burial 3 in Zone H: a, Avery Engraved, *var. Bradshaw* compound bowl; b, McKinney Plain jar; c, applied bowl with broken pedestal legs. Redrawn from Laughlin (1940).

been roughened, and there are also four equally-spaced vertical applied ridges extending from the rim peaks/lip tabs to within 1.2 cm of the vessel base (Figure 17; see also Figure 16b).

PIGMENT USE AND LOCATION ON VESSEL: none

TYPE AND VARIETY (IF KNOWN): McKinney Plain or McKinney Appliqued

VESSEL NO.: 6-3-202; Burial 3 in Zone H in the platform mound

VESSEL FORM: Bowl with four legs in a pedestal base

NON-PLASTICS AND PASTE: grog and bone

RIM AND LIP FORM: Inverted rim and rounded lip

CORE COLOR: B (fired and cooled in a reducing environment)

INTERIOR SURFACE COLOR: black

EXTERIOR SURFACE COLOR: very dark grayish-brown; fire clouds on the body

WALL THICKNESS (IN MM): rim, 4.9 mm

INTERIOR SURFACE TREATMENT: smoothed

EXTERIOR SURFACE TREATMENT: smoothed on the base

HEIGHT (IN CM): 7.0

ORIFICE DIAMETER (IN CM): 8.0

DIAMETER AT BOTTOM OF RIM OR NECK (IN CM): N/A

BASE DIAMETER (IN CM) AND SHAPE OF BASE: 7.6; circular and round

ESTIMATED VOLUME (IN LITERS): 0.22



Figure 17. McKinney Plain jar (6-3-201) in Burial 3 in Zone H in the platform mound at the Hatchel site. Photograph courtesy of TARL.

DECORATION (INCLUDING MOTIF AND ELEMENTS WHEN APPARENT):
The vessel has four applied knobs (two have fallen off), 29 mm in diameter, and each knob (25 mm in height) is comprised of six concentric applied ridges (Figure 18; see also Figure 16c). There are four concentric applied ridge semi-circles around each applied knob. The legs (three of which have fallen off) are between 19-21 mm in diameter.

PIGMENT USE AND LOCATION ON VESSEL: none

TYPE AND VARIETY (IF KNOWN):
Unidentified applied vessel (see Suhm and Jelks 1962:Plate 26c; Webb 1959:Figure 122p) with four pedestal legs



Figure 18. Applied bowl with pedestal legs (6-3-202) in Burial 3 in Zone H in the platform mound at the Hatchel site. Photograph courtesy of TARL.

Under Zone H

VESSEL NO.: F.S. 1432; under Zone H in the platform mound

VESSEL FORM: Carinated bowl

NON-PLASTICS AND PASTE: grog

RIM AND LIP FORM: Inverted rim and rounded lip

CORE COLOR: G (fired in a reducing environment and cooled in the open air)

INTERIOR SURFACE COLOR: grayish-brown

EXTERIOR SURFACE COLOR: dark reddish-brown; fire clouds on the rim and body

WALL THICKNESS (IN MM): rim, 5.6 mm

INTERIOR SURFACE TREATMENT: smoothed

EXTERIOR SURFACE TREATMENT: burnished

HEIGHT (IN CM): 16.3

ORIFICE DIAMETER (IN CM): 24.8

DIAMETER AT BOTTOM OF RIM OR NECK (IN CM): 22.8

BASE DIAMETER (IN CM) AND SHAPE OF BASE: 10.2; circular and flat

ESTIMATED VOLUME (IN LITERS): 4.6

DECORATION (INCLUDING MOTIF AND ELEMENTS WHEN APPARENT): The upper part of the rim has two horizontal engraved lines above rectangular panels repeated four times around the vessel (Figure 19). The panels have two horizontal engraved lines with diagonal spurs; the panels have curvilinear ends and are divided by a single near vertical engraved line.

PIGMENT USE AND LOCATION ON VESSEL: none

TYPE AND VARIETY (IF KNOWN): Barkman Engraved

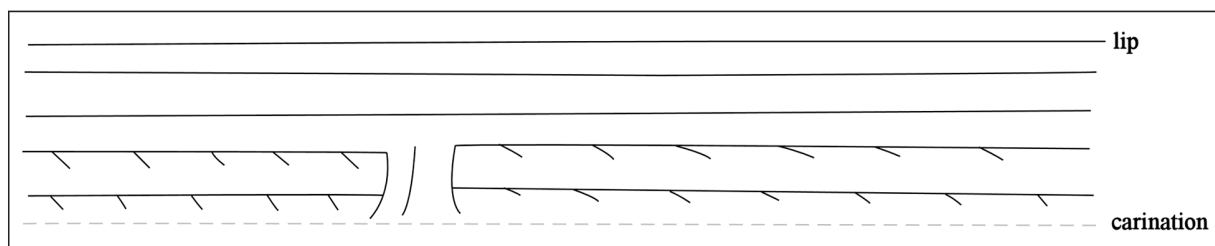


Figure 19. Decorative elements on Barkman Engraved carinated bowl (F.S. 1432) under Zone H in the platform mound at the Hatchel site.

Zone K

VESSEL NO.: 6-3-206; Zone K, the original occupational surface underneath the platform mound

VESSEL FORM: Carinated bowl

NON-PLASTICS AND PASTE: grog

RIM AND LIP FORM: Direct rim and rounded lip

CORE COLOR: A (fired and cooled in an oxidizing environment)

INTERIOR SURFACE COLOR: yellowish-brown; fire clouds on the body

EXTERIOR SURFACE COLOR: yellowish-brown; fire clouds on the rim

WALL THICKNESS (IN MM): rim, 6.7 mm

INTERIOR SURFACE TREATMENT: smoothed

EXTERIOR SURFACE TREATMENT: smoothed on the body

HEIGHT (IN CM): 8.2

ORIFICE DIAMETER (IN CM): 15.7

DIAMETER AT BOTTOM OF RIM OR
NECK (IN CM): 15.7

BASE DIAMETER (IN CM) AND SHAPE
OF BASE: 8.9 cm; circular and flat

ESTIMATED VOLUME (IN LITERS): 0.77

DECORATION (INCLUDING MOTIF AND
ELEMENTS WHEN APPARENT): The rim
is decorated with three horizontal incised
lines as well as slanting incised lines (slant-
ing scroll line) around an incised circle motif
repeated four times around the vessel (Figure
20a-b). The incised circle element is filled
with rows of tool punctations. Above and
below the slanting scroll lines are pendant
triangle elements filled with diagonal and
curvilinear incised lines.

PIGMENT USE AND LOCATION ON
VESSEL: none

TYPE AND VARIETY (IF KNOWN):
Crockett Curvilinear Incised

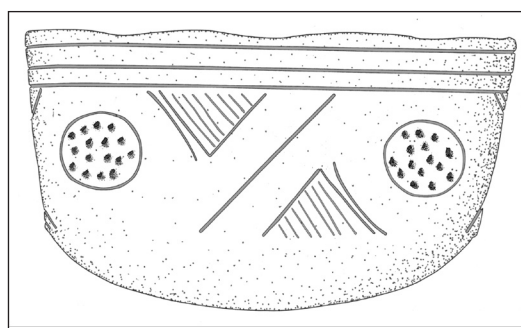


Figure 20. Crockett Curvilinear Incised (6-3-206) carinated bowl in Zone K in the platform mound at the Hatchel site: a, photograph, courtesy of TARL; b, drawing, redrawn from Laughlin (1940).

Side of the Platform Mound

VESSEL NO.: 6-3-203; Burial 4 in a pit intruded into the side of the platform mound (Perttula 2014a:41)

VESSEL FORM: Jar

NON-PLASTICS AND PASTE: grog and bone

RIM AND LIP FORM: Everted rim and rounded lip

CORE COLOR: F (fired in a reducing environment and cooled in the open air)

INTERIOR SURFACE COLOR: dark yellowish-brown; fire clouds on the body and base

EXTERIOR SURFACE COLOR: dark yellowish-brown; fire clouds on the base

WALL THICKNESS (IN MM): rim, 5.6 mm

INTERIOR SURFACE TREATMENT: none

EXTERIOR SURFACE TREATMENT:
none

HEIGHT (IN CM): 5.9

ORIFICE DIAMETER (IN CM): 8.2

DIAMETER AT BOTTOM OF RIM OR
NECK (IN CM): 6.7

BASE DIAMETER (IN CM) AND SHAPE
OF BASE: 3.1 cm; circular and flat

ESTIMATED VOLUME (IN LITERS): 0.29

DECORATION (INCLUDING MOTIF
AND ELEMENTS WHEN APPARENT):
Plain (Figures 21 and 22c)

PIGMENT USE AND LOCATION ON
VESSEL: none

TYPE AND VARIETY (IF
KNOWN): Unidentified plain
ware

VESSEL NO.: 6-3-204; Burial 4
in the platform mound

VESSEL FORM: Bottle with a
spool neck

NON-PLASTICS AND PASTE:
grog

RIM AND LIP FORM: Everted
rim and rounded lip

CORE COLOR: B (fired and
cooled in a reducing environment)

INTERIOR SURFACE COLOR:
very dark grayish-brown

EXTERIOR SURFACE COLOR:
very dark grayish-brown; fire
clouds on the rim and body



Figure 21. Plain jar (6-3-203) in Burial 4 in the platform mound at the Hatchel site. Photograph courtesy of TARL.

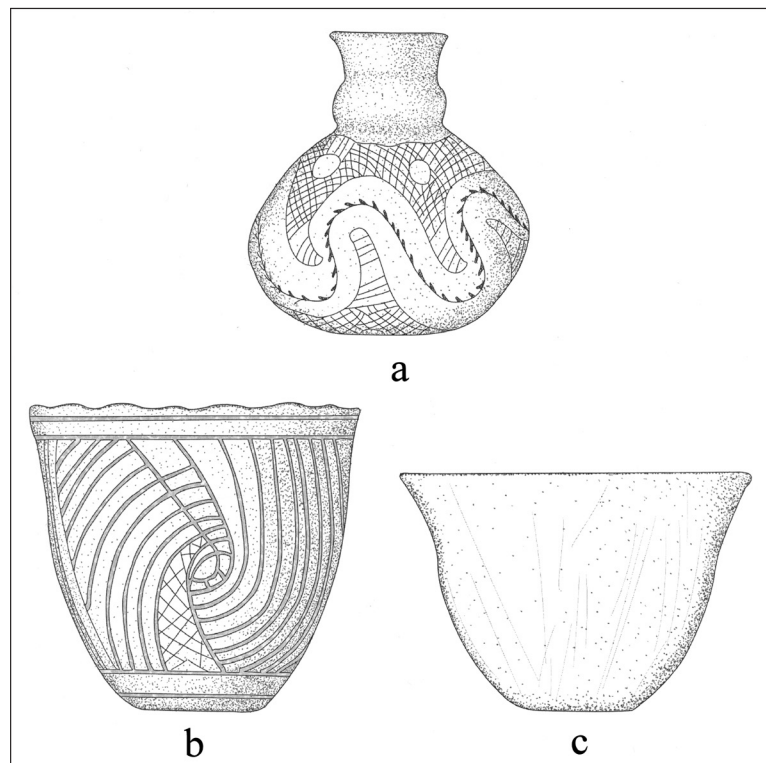


Figure 22. Drawings of vessels from Burial 4 in the platform mound at the Hatchel site: a, Hodges Engraved, var. Candler bottle; b, engraved bowl; c, plain jar.

WALL THICKNESS (IN MM): rim, 4.0 mm

INTERIOR SURFACE TREATMENT: none

EXTERIOR SURFACE TREATMENT: burnished

HEIGHT (IN CM): 7.6

ORIFICE DIAMETER (IN CM): 2.5

DIAMETER AT BOTTOM OF RIM OR NECK (IN CM): 2.6; maximum body diameter is 6.4 cm

BASE DIAMETER (IN CM) AND SHAPE OF BASE: 2.6 cm; circular and flat

ESTIMATED VOLUME (IN LITERS): 0.1

DECORATION (INCLUDING MOTIF AND ELEMENTS WHEN APPARENT): The vessel body has an engraved meandering scroll with outward-pointing excised tick marks (Figure 23; see also Figure 22a). Above and below the meandering scroll lines are curvilinear cross-hatched engraved zones with hatched tips (nearest the scroll line). Below the tips of each of the cross-hatched and hatched zones are single negative circle elements (Figure 23).

PIGMENT USE AND LOCATION ON VESSEL: none

TYPE AND VARIETY (IF KNOWN): Hodges Engraved, *var. Candler* (Schambach and Miller 1984:122)

VESSEL NO.: 6-3-205; Burial 4 in the platform mound

VESSEL FORM: Bowl

NON-PLASTICS AND PASTE: grog and bone

RIM AND LIP FORM: Direct rim and rounded lip

CORE COLOR: B (fired and cooled in a reducing environment)

INTERIOR SURFACE COLOR: very dark grayish-brown; fire clouds on the rim



Figure 23. Hodges Engraved, *var. Candler* bottle in Burial 4 in the platform mound at the Hatchel site. Photograph courtesy of TARL.

EXTERIOR SURFACE COLOR: very dark grayish-brown; fire clouds on the rim

WALL THICKNESS (IN MM): rim, 6.4 mm

INTERIOR SURFACE TREATMENT: smoothed

EXTERIOR SURFACE TREATMENT: smoothed

HEIGHT (IN CM): 7.2

ORIFICE DIAMETER (IN CM): 7.6

DIAMETER AT BOTTOM OF RIM OR NECK (IN CM): N/A

BASE DIAMETER (IN CM) AND SHAPE OF BASE: 3.1 cm; circular and flat

ESTIMATED VOLUME (IN LITERS): 0.22

DECORATION (INCLUDING MOTIF AND ELEMENTS WHEN APPARENT):

The vessel has two horizontal engraved lines at the top of the vessel and two near the vessel base. The panel between has four sets of vertical scrolls divided by sets of three vertical engraved lines (Figure 24; see also Figure 22b). Two sets of vertical scrolls have a central circle with a hooked arm as well as sets of curvilinear lines on either side of the scroll line. The other two sets have a narrow scroll zone filled with hatched lines, and there are sets of curvilinear engraved lines on either side of the scroll zone (Figure 24).

PIGMENT USE AND LOCATION ON VESSEL: none

TYPE AND VARIETY (IF KNOWN):
Unidentified fine ware



Figure 24. Engraved bowl (6-3-205) in Burial 4 in the platform mound at the Hatchel site. Photograph courtesy of TARL.

Ceramic Vessel Sections

There are vessel sections on each of the structural zones in the platform mound at the Hatchel site, but the greatest number are in Zone H, the first of the zones with burned temple structures across the mound platform. A vessel section is a portion—between ca. 25-50 percent—of a whole vessel, marked by a number of conjoined/refitted sherds. In several instances, vessel sections have been refitted from sherds recovered in different zones, including zones D and G (n=1), zones F and H (n=1), zones G and H (n=2), and zones F, G, and H (n=2). The conjoined vessel sections represent the considerable movement of broken and discarded ceramic vessels between temporally sequent zones of temple structures.

Zone A

The one vessel section in Zone A, Feature 3, is represented by four conjoined rim and body sherds from a grog-tempered Cowhide Stamped jar (see Webb 1959:Figure 109) with a 6.5 cm high rim. The rim has curvilinear incised scrolls filled with stamping elements (Figure 25). The vessel body is divided into sections by vertical applied fillets. The body sections between the fillets have a series of diagonal to curvilinear trailed lines.

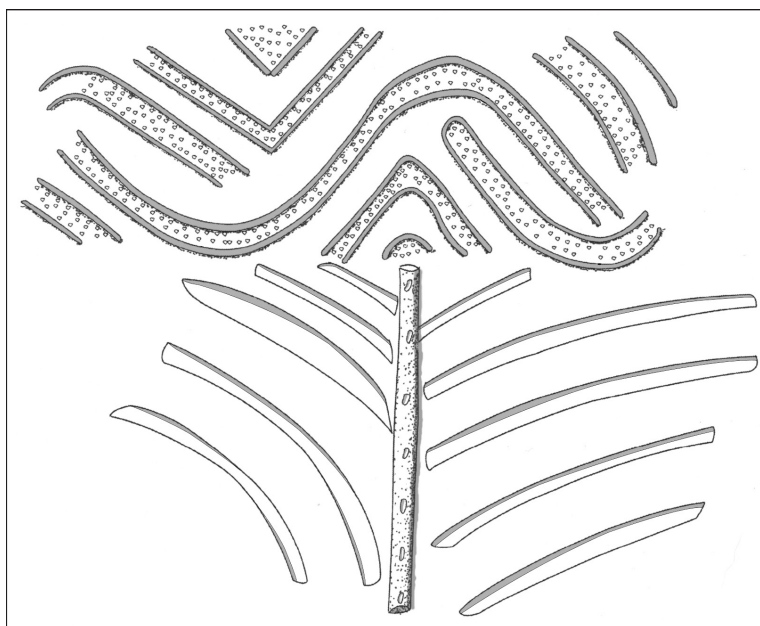


Figure 25. Decorative elements on a Cowhide Stamped vessel section from Feature 3 in Zone A.

Zone B

The first of the two vessel sections in Zone B is a grog-tempered Hodges Engraved, *var. unspecified* bowl from Feature 4. The bowl is 11.5 cm in height and the base diameter is 8.4 cm. The main decorative element consists of meandering engraved scroll lines that interlock; one of the scroll lines has small tick marks (Figure 26). Above and below the meandering scroll lines are cross-hatched scroll fill zones as well as hatched scroll fill zones around negative oval-shaped elements. A red pigment has been rubbed in the engraved lines.

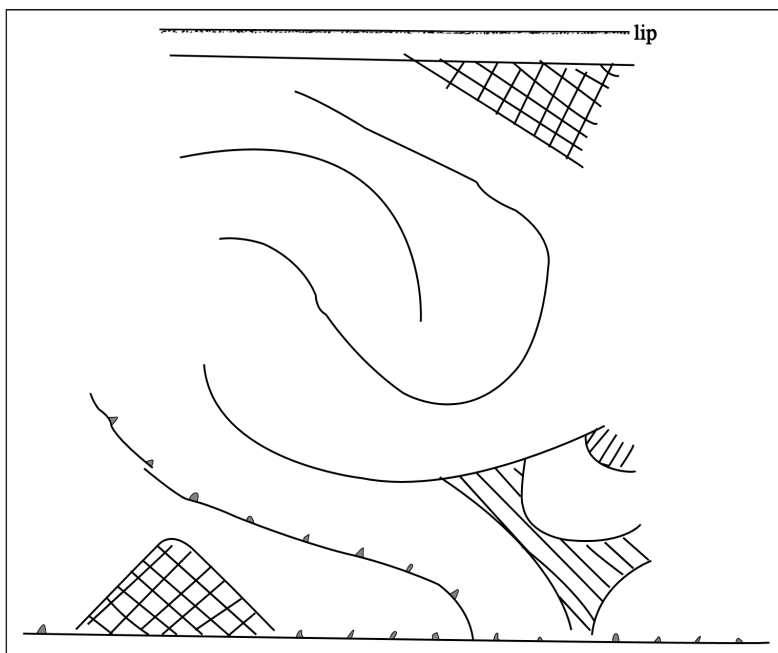


Figure 26. Decorative elements on a Hodges Engraved, *var. unspecified* vessel section from Feature 4 in Zone B.

The second vessel section in Zone B is a grog-tempered Simms Engraved carinated bowl with an inverted rim from Feature 4. The upper part of the rim has a single horizontal engraved line, while the lower portion of the rim is divided into sections by hatched brackets and single curvilinear engraved lines with linear tick marks (Figure 27). The remainder of the lower rim panel has curvilinear and horizontal engraved elements with downward-pointing excised tick marks.

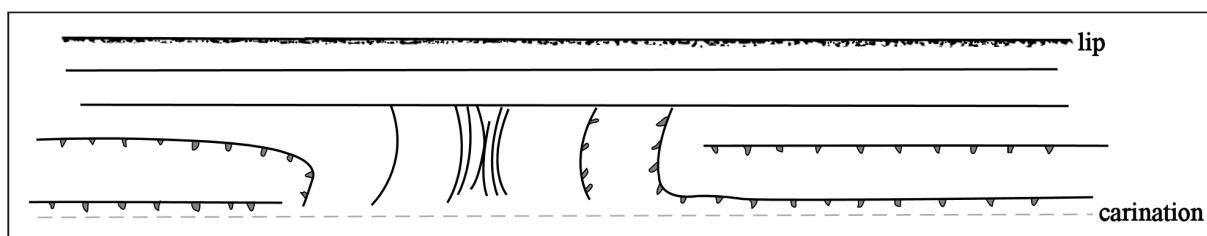


Figure 27. Decorative elements on a Simms Engraved vessel section from Feature 4 in Zone B.

Zone C

There are three vessel sections in Zone C. Two are portions of plain jars and the third is part of a Belcher Engraved carinated bowl. The first plain jar vessel section, comprised of body sherds, is grog-tempered and was recovered in Feature 7 in Zone C. The second plain jar vessel section of body sherds was recovered in both Feature 8 and 9 in Zone C, and one of the conjoined sherds came from underlying Zone E.

The third vessel section in Zone C includes four conjoined rim sherds from a grog-tempered Belcher Engraved carinated bowl, recovered from Feature 8. The rim has three rows of excised punctations, the first row under the lip and the third at the carination (Figure 28). There are single

horizontal engraved lines under the upper two rows of excised punctations. A white clay pigment has been rubbed into the engraved and excised punctated elements.

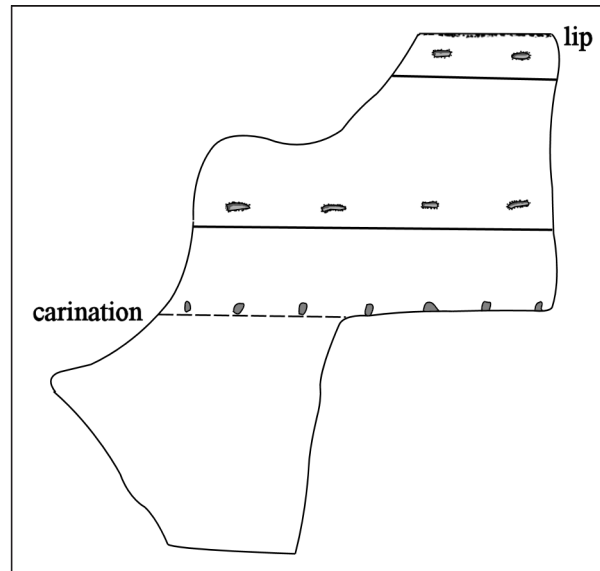


Figure 28. Decorative elements on a Belcher Engraved vessel section from Feature 8 in Zone C.

Zone D

There are three vessel sections in Zone D. The first is these is the lower body and base section of a jar:

VESSEL NO.: F.S. 379, Zone D

VESSEL FORM: Jar; lower body and base section only

NON-PLASTICS AND PASTE: grog

RIM AND LIP FORM: N/A

CORE COLOR: H (fired in a reducing environment and cooled in the open air)

INTERIOR SURFACE COLOR: grayish-brown

EXTERIOR SURFACE COLOR: very dark grayish-brown; fire clouds on the body

WALL THICKNESS (IN MM): body, 6.1 mm

INTERIOR SURFACE TREATMENT: smoothed

EXTERIOR SURFACE TREATMENT: smoothed

HEIGHT (IN CM): 10.0+

ORIFICE DIAMETER (IN CM): 17.8

DIAMETER AT BOTTOM OF RIM OR NECK (IN CM): N/A

BASE DIAMETER (IN CM) AND SHAPE OF BASE: 7.6 cm; circular and flat

ESTIMATED VOLUME (IN LITERS):
1.1+

DECORATION (INCLUDING MOTIF
AND ELEMENTS WHEN APPARENT):
Plain (Figure 29)

PIGMENT USE AND LOCATION ON
VESSEL: none

TYPE AND VARIETY (IF KNOWN):
Unidentified plain ware



Figure 29. Lower body and base section of plain jar, F.S. 379 in Zone D in the platform mound at the Hatchel site. Photograph courtesy of TARL.

The second vessel section in Zone D are grog-tempered body sherds from Feature 11, as well as one refitted sherd from Zone G. This vessel section has a horizontal incised zone filled with at least 11 rows of closely-spaced circular tool punctations. The third Zone D vessel section are grog-tempered body sherds from a plain jar from Feature 12.

Zone E

Four vessel sections were recovered in Zone E at the Hatchel mound. The first of these is a section of a grog-tempered compound bowl with at least two widely-spaced horizontal engraved lines on the upper panel. One of the conjoined sherds came from Zone F and another came from Features 19-20 in Zone H.

The second vessel section includes body sherds from a grog-tempered Hatchel Engraved vessel. It has circular engraved elements with large open pendant triangles, as well as at least one excised area adjacent to a third circular engraved line (Figure 30). On the central circular element, one of the pendant triangles has a smaller open pendant triangle within it.

A third vessel section in Zone E includes a number of body sherds from a grog-tempered carinated bowl, probably of the Barkman Engraved type. The rim has

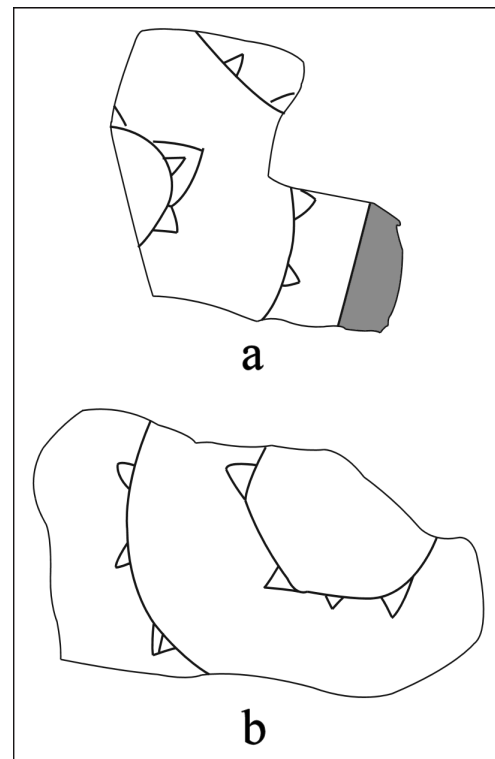


Figure 30. Decorative elements on Hatchel Engraved vessel section from Zone E.

at least two widely-spaced horizontal engraved lines as well as diagonal engraved lines with linear excised punctations (Figure 31). There are diagonal and curvilinear cross-hatched zones to one side of the diagonal lines as well as a circular zone with at least one circular line with open pendant triangles.

The fourth and last vessel section in Zone E are the rim sherds from a grog-bone-tempered Simms Engraved carinated bowl; one conjoined rim sherd is from Zone G. The upper part of the rim has two horizontal engraved lines, and the lower part of the rim panel is divided into sections by a vertical hatched bracket element (Figure 32). Between the brackets is a single curvilinear engraved line with excised tick marks and two horizontal and/or vertical engraved lines with downward-pointing diagonal tick marks.

Zone F

Zone F in the platform mound has four vessel sections. The first consists of 78 sherds from a grog-bone-tempered Foster Trailed-Incised, *var. Foster* jar (see Schambach and Miller 1984); the jar stood an estimated 28.5 cm in height, and the rim height is 11.3 cm. The rim has three sets of diagonal incised lines, while the vessel body has a number of curvilinear trailed lines (Figure 33).

The second vessel section is a grog-tempered compound bowl, probably an Avery Engraved, *var. Bradshaw* vessel (see Schambach and Miller 1984:119-120). The lower panel has cross-hatched engraved brackets and circle elements, including a small central circle with diagonal tick marks (or rays) (Figure 34).

The third vessel section in Zone F is a bone-tempered carinated bowl with a scalloped lip. The rim height is only 1.7 cm, while the rim and body walls are 5.4-6.3 mm in thickness. The rim itself has a rectangular engraved element consisting of a series of either one to three vertical engraved lines (Figure 35). The interior and exterior vessel surface has a hematite-rich clay slip.

The last of the Zone F vessel sections is a bone-tempered carinated bowl with a red clay slip on both interior and exterior surfaces. It does not conjoin with the above-described engraved-red-slipped carinated bowl from Zone F.

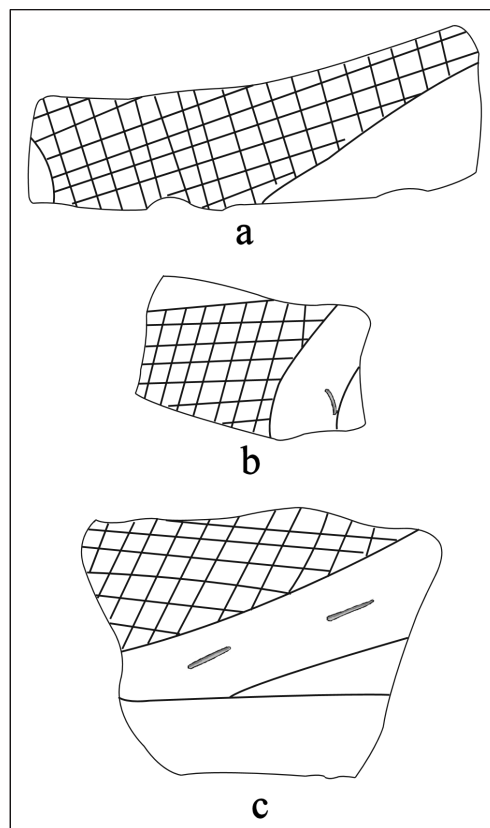


Figure 31. Decorative elements on engraved carinated bowl vessel section from Zone E and Feature 14.



Figure 32. Decorative elements on Simms Engraved vessel section from Zone E.

Zone F/Zone G/Zone H

One grog-tempered McKinney Plain jar vessel section of rim, body, and base sherds with a roughened rim was recovered in Zone F, Zone G, and Features 19-20 in Zone H. A second vessel section from the same zones is from a grog-tempered Simms Engraved carinated bowl. The vessel is ca. 19.3 cm in height with a flat base 9.5 cm in diameter; rim height is only 2.5 cm. Rim and body wall thickness ranges from 5.4-6.4 mm, while the base is 9.3 mm in thickness. The body walls have been burnished on both surfaces, and the vessel itself was fired and cooled in a reducing or low oxygen environment. The lower part of the rim has a narrow horizontal engraved zone with a single row of excised punctations (Figure 36).

Zone F and Zone H

The one vessel section of conjoined rim and body sherds from Zones F and H are from a grog-tempered Barkman Engraved carinated bowl with a 23.3 cm orifice diameter. The rim panel is divided into sections by vertical engraved brackets, and the sections have central horizontal and vertical scroll lines (Figure 37). Above each of the scrolls

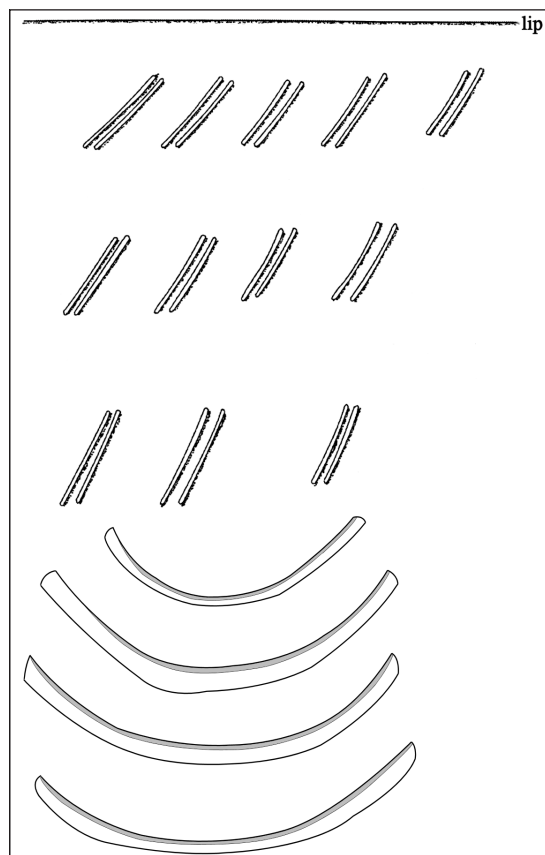


Figure 33. Decorative elements on Foster Trailed-Incised, var. Foster vessel section from Zone F.

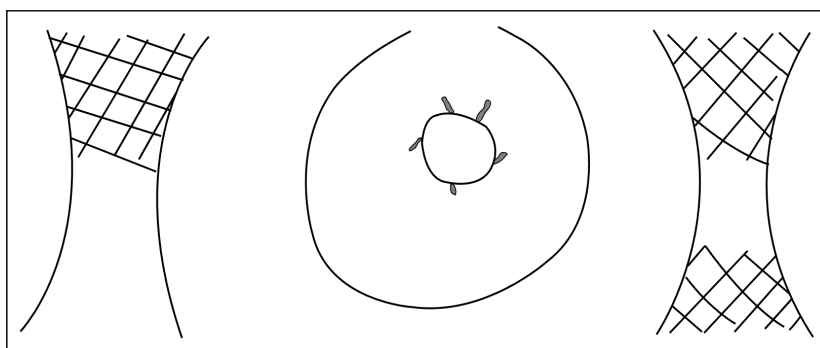


Figure 34. Decorative elements on Avery Engraved vessel section from Zone F.

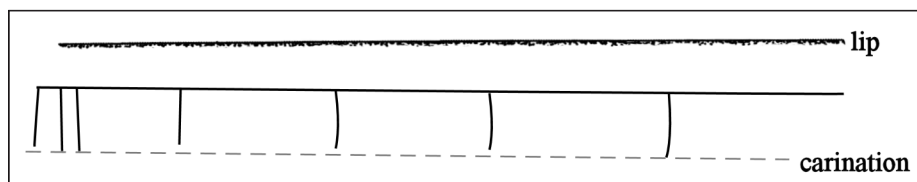


Figure 35. Decorative elements on engraved carinated bowl vessel section from Zone F.

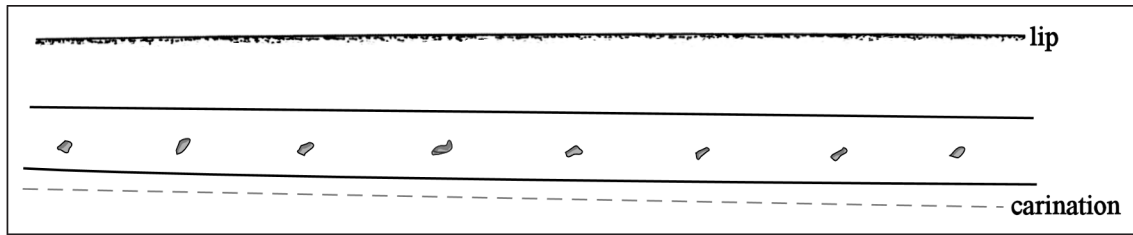


Figure 36. Decorative elements on Simms Engraved carinated bowl vessel section from Zones F, G, and H.

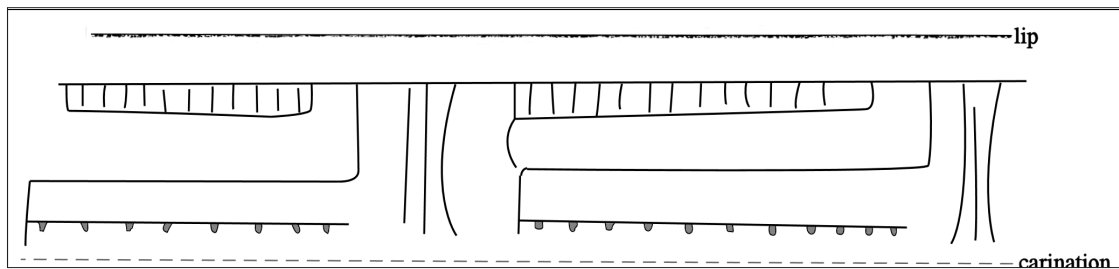


Figure 37. Decorative elements on Barkman Engraved carinated bowl vessel section from Zones F and H.

are zones with closely-spaced vertical hatched lines, while below the scrolls are single horizontal engraved lines with downward-pointing tick marks.

Zone G

Seven different vessel sections are present in Zone G. The first is a shell-tempered lip notched bowl:

VESSEL NO.: F.S. 754, Zone G in the platform mound

VESSEL FORM: Bowl

NON-PLASTICS AND PASTE: shell

RIM AND LIP FORM: Direct rim and rounded lip

CORE COLOR: B (fired and cooled in a reducing environment)

INTERIOR SURFACE COLOR: dark grayish-brown

EXTERIOR SURFACE COLOR: dark grayish-brown

WALL THICKNESS (IN MM): rim, 4.5 mm

INTERIOR SURFACE TREATMENT: smoothed

EXTERIOR SURFACE TREATMENT: burnished

HEIGHT (IN CM): 3.7

ORIFICE DIAMETER (IN CM): 11.0

DIAMETER AT BOTTOM OF RIM OR
NECK (IN CM): N/A

BASE DIAMETER (IN CM) AND SHAPE
OF BASE: 3.7 cm; circular and flat

ESTIMATED VOLUME (IN LITERS): 0.16

DECORATION (INCLUDING MOTIF AND
ELEMENTS WHEN APPARENT): The
vessel is plain, except for regular notching
along the lip (Figure 38).

PIGMENT USE AND LOCATION ON
VESSEL: none

TYPE AND VARIETY (IF KNOWN):
Unidentified fine ware

The second vessel section in Zone G is from Feature 22, one of the temple structures in the platform mound. It is an incised grog-tempered jar:

VESSEL NO.: 6-3-199, Feature 22 in Zone G in the platform mound

VESSEL FORM: Jar

NON-PLASTICS AND PASTE: grog

RIM AND LIP FORM: Everted rim and rounded lip

CORE COLOR: G (fired in a reducing environment and cooled in the open air)

INTERIOR SURFACE COLOR: very dark grayish-brown

EXTERIOR SURFACE COLOR: dark yellowish-brown; fire clouds on the body and base

WALL THICKNESS (IN MM): rim, 5.4 mm; body, 6.2 mm

INTERIOR SURFACE TREATMENT: smoothed

EXTERIOR SURFACE TREATMENT: smoothed on the body

HEIGHT (IN CM): 9.5



Figure 38. Lip-notched bowl (F.S. 754) in Zone G in the platform mound at the Hatchel site. Photograph courtesy of TARL.

ORIFICE DIAMETER (IN CM): 13.2

DIAMETER AT BOTTOM OF RIM OR
NECK (IN CM): 12.6

BASE DIAMETER (IN CM) AND
SHAPE OF BASE: 4.8 cm; circular and
flat

ESTIMATED VOLUME (IN LITERS):
0.75

DECORATION (INCLUDING MOTIF
AND ELEMENTS WHEN APPARENT):
The rim is decorated with two horizontal
rows of left-to-right drawn diagonal
incised lines (Figure 39).

PIGMENT USE AND LOCATION ON
VESSEL: none

TYPE AND VARIETY (IF KNOWN):
Unidentified utility ware

The third vessel section in Zone G includes rim, body, and base sherds from a grog-tempered McKinney Plain jar that stood at least 25 cm in height. The rim is roughened, with a single horizontal incised line at the rim-body juncture. The vessel body has an unknown number of vertical applied ridges.

The fourth vessel section of conjoined rim and body sherds in this zone is a grog-tempered Foster Trailed-Incised, *var. Foster* jar (Schambach and Miller 1984:121); the rim height is 9.1 cm. The rim has five zones of diagonal incised lines pitched in opposite directions, while the vessel body has a series of trailed concentric circles; in the smallest and centrally-placed central circle are two small applied nodes (Figure 40).

The fifth vessel section in Zone G is from a grog-tempered brushed jar. The rim of the vessel has light horizontal brushing marks, with a single broad horizontal incised line at the rim-body juncture. There are diagonal brushing marks



Figure 39. Incised jar (6-3-199) in Feature 22 in Zone G in the platform mound at the Hatchel site. Photograph courtesy of TARL.

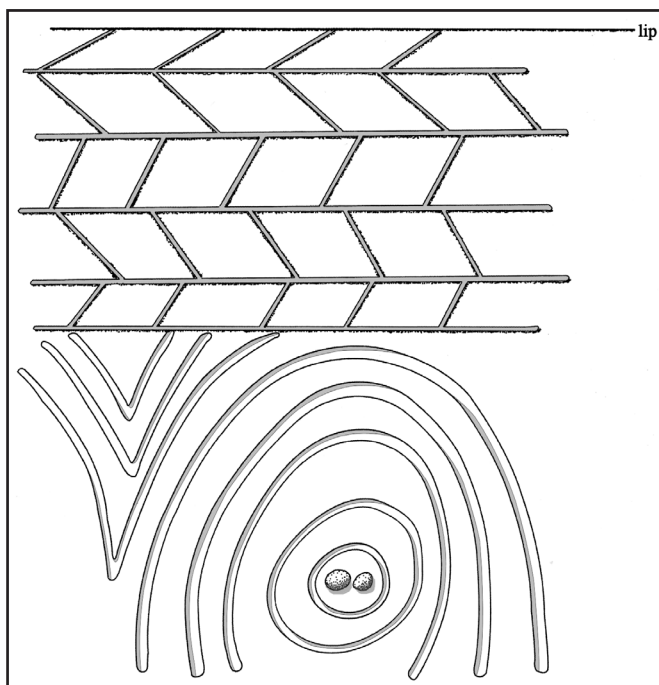


Figure 40. Decorative elements on Foster Trailed-Incised, *var. Foster* vessel section in Zone G.

on the vessel body. The sixth vessel section includes rim and body sherds from a grog-tempered jar, possibly of the Cass Appliqued type (Suhm and Jelks 1962:25 and Plate 13). The rim has closely-spaced horizontal incised lines, while the vessel body has a series of closely-spaced vertical appliqued ridges. There are either vertical incised lines or vertical brushing marks between the appliqued ridges.

The last Zone G vessel sections are comprised of plain body and base sherds from a grog-tempered jar, and seven sherds from a grog-tempered carinated bowl with a red slip on both interior and exterior vessel surfaces.

Zones G and H

There are two vessel sections comprised of conjoined sherds from both Zone G and Zone H. The first is a shell-tempered Foster Trailed-Incised, *var. unspecified* jar with multiple curvilinear trailed lines. The sherds are from Zone G and the underlying Feature 19-20 in Zone H.

The second vessel section from these zones is a bone-tempered Barkman Engraved carinated bowl. Vessel height is estimated at 24.0 cm, with an 8.8 cm base diameter. The rim height is 3.4 cm, and the rim thickness is 7.2 mm. Body and base wall thickness is 7.0 mm and 10.7 mm, respectively. The rim panel is divided into sections by vertical engraved brackets or single vertical engraved lines. The sections have a single horizontal and vertical scroll line, with a zone above the scroll filled with closely-spaced and short vertical engraved lines (Figure 41). The bottom horizontal engraved line of the scroll has downward-pointing excised tick marks.

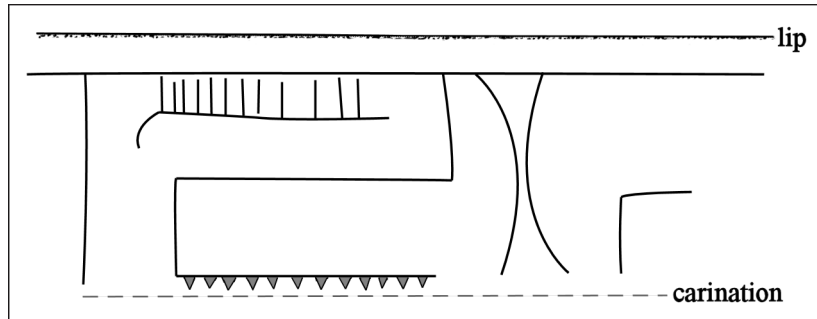


Figure 41. Decorative elements on Barkman Engraved vessel section from Zones G and H.

Zone H

Zone H has 12 different ceramic vessel sections, including one vessel section from Burial 3:

VESSEL NO.: F.S. 1349, Burial 3 in Zone H in the platform mound

VESSEL FORM: Carinated bowl; vessel broken at and immediately above the carination

NON-PLASTICS AND PASTE: grog

RIM AND LIP FORM: N/A

CORE COLOR: B (fired and cooled in a reducing environment)

INTERIOR SURFACE COLOR: dark grayish-brown

EXTERIOR SURFACE COLOR: very dark grayish-brown

WALL THICKNESS (IN MM): body, 6.9 mm

INTERIOR SURFACE TREATMENT: smoothed

EXTERIOR SURFACE TREATMENT: burnished; organic residue on the vessel body

HEIGHT (IN CM): 13.3+

ORIFICE DIAMETER (IN CM): 24.8

DIAMETER AT BOTTOM OF RIM OR NECK (IN CM): 24.8

BASE DIAMETER (IN CM) AND SHAPE OF BASE: 8.9; circular and flat

ESTIMATED VOLUME (IN LITERS): 2.9+

DECORATION (INCLUDING MOTIF AND ELEMENTS WHEN APPARENT): Unidentified engraved elements on the lowermost part of the rim panel.

PIGMENT USE AND LOCATION ON VESSEL: red pigment in the engraved lines

TYPE AND VARIETY (IF KNOWN): Unidentified fine ware

The second vessel section is from an olla, a rare vessel form in the ceramic assemblage from the Hatchel site:

VESSEL NO.: F.S. 993/994; Zone H in the platform mound (80L4).

VESSEL FORM: Olla

NON-PLASTICS AND PASTE: grog

RIM AND LIP FORM: N/A

CORE COLOR: F (fired in a reducing environment and cooled in the open air)

INTERIOR SURFACE COLOR: grayish-brown

EXTERIOR SURFACE COLOR: brown; fire clouds on the rim and body

WALL THICKNESS (IN MM): rim, 7.5 mm; body, 7.5 mm

INTERIOR SURFACE TREATMENT: none

EXTERIOR SURFACE TREATMENT: burnished

HEIGHT (IN CM): 30.3+

ORIFICE DIAMETER (IN CM): 5.2

DIAMETER AT BOTTOM OF RIM OR NECK (IN CM): 7.1; maximum body diameter is 31.8 cm

BASE DIAMETER (IN CM) AND SHAPE OF BASE: N/A

ESTIMATED VOLUME (IN LITERS): N/A

DECORATION (INCLUDING MOTIF AND ELEMENTS WHEN APPARENT): The top of the vessel body has three horizontal engraved lines and at least two (but possibly as many as eight) large engraved pendant triangles (Figure 42). These pendant triangles have a single concentric semi-circle element and the apex of the triangles has an excised triangle element.

PIGMENT USE AND LOCATION ON VESSEL: red pigment in engraved lines

TYPE AND VARIETY (IF KNOWN): Unidentified fine ware

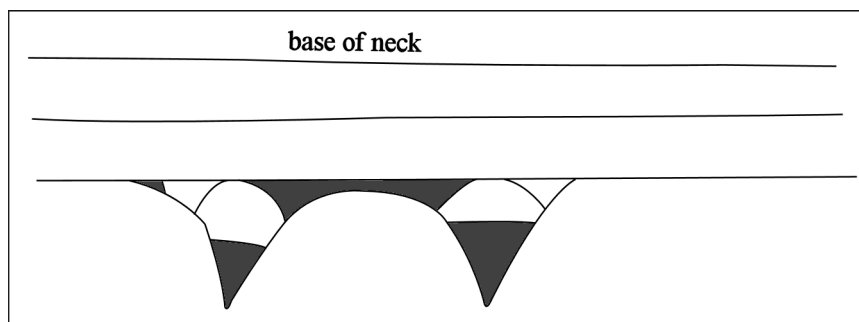


Figure 42. Decorative element on engraved olla (F.S. 993/994) in Zone H in the platform mound at the Hatchel site.

The third vessel section in Zone H is a Belcher Engraved, *var. Belcher* carinated bowl:

VESSEL NO.: F.S. 1297, Zone H in the platform mound (Features 19 and 20)

VESSEL FORM: Carinated bowl

NON-PLASTICS AND PASTE: grog

RIM AND LIP FORM: Inverted-direct rim and rounded lip

CORE COLOR: B (fired and cooled in a reducing environment)

INTERIOR SURFACE COLOR: black

EXTERIOR SURFACE COLOR: black

WALL THICKNESS (IN MM): rim, 4.6 mm; body, 4.2 mm

INTERIOR SURFACE TREATMENT: burnished

EXTERIOR SURFACE TREATMENT: burnished

HEIGHT (IN CM): N/A; rim panel is 3.0 cm in height

ORIFICE DIAMETER (IN CM): 20.3

DIAMETER AT BOTTOM OF RIM OR NECK (IN CM): 20.1

BASE DIAMETER (IN CM) AND SHAPE OF BASE: N/A

ESTIMATED VOLUME (IN LITERS): N/A

DECORATION (INCLUDING MOTIF AND ELEMENTS WHEN APPARENT):

The rim is divided into three panels: (1) the upper panel is defined by a single horizontal engraved line and has a single central row of excised punctations; (2) the middle panel is plain; and (3) the lower panel, above the carination, has four quadrating applied nodes (10 mm in diameter and 6 mm in height) surrounded by sets of four curvilinear engraved lines (Figure 43). Between the applied nodes are a series of zones defined by diagonal engraved lines, and each of these zones are filled with two rows of excised punctations.

PIGMENT USE AND LOCATION ON VESSEL: none

TYPE AND VARIETY (IF KNOWN): Belcher Engraved, *var. Belcher* (Schambach and Miller 1984:120)



Figure 43. Belcher Engraved, *var. Belcher* carinated bowl section (F.S. 1297) in Features 19 and 20 in Zone H in the platform mound at the Hatchel site.

The fourth vessel section in Zone H is comprised of conjoined rim and body sherds from a grog-tempered Barkman Engraved carinated bowl. The rim panel has a single upper horizontal engraved line, vertical and curvilinear line dividers, and a central horizontal scroll line (Figure 44). Above the scroll line is a narrow zone filled with vertical hatched lines, while below the scroll line is another horizontal engraved line with downward-pointing excised tick marks. A white pigment has been ribbed in the engraved lines and tick marks.

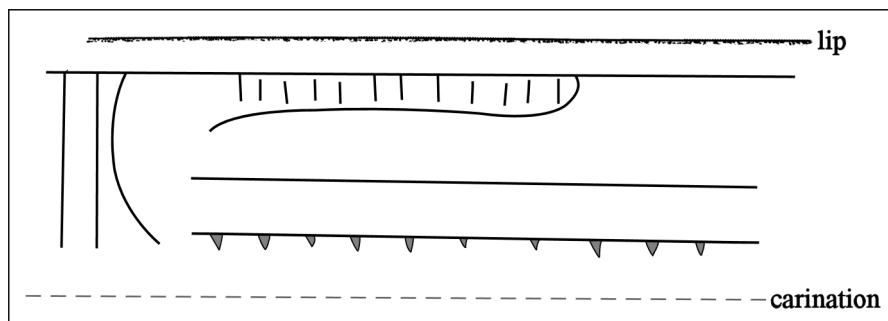


Figure 44. Decorative elements on a Barkman Engraved carinated bowl vessel section in Zone H.

The fifth Zone H vessel section includes rim and lower rim sherds from Features 19-20 as well as sherds distributed in the zone deposits. The rim and lower rim sherds are from a grog-tempered McKinney Plain jar with lip tabs. The rim is roughened, and there are bracket-shaped applied elements underneath the lip tabs, followed by a vertical incised line that begins underneath the applied element. The vessel body has horizontal brushing marks and vertical applied ridges.

Sherds from a plain grog-tempered bottle recovered in Feature 18 comprise the sixth vessel section in Zone H. The seventh vessel section includes rim sherds from a shell-tempered Avery Engraved compound bowl. The vessel also has a red slip on both interior and exterior vessel surfaces. On the upper panel are triangular elements with curvilinear hatched lines, while the lower panel has an elongated triangle element filled with curvilinear hatched lines (Figure 45).

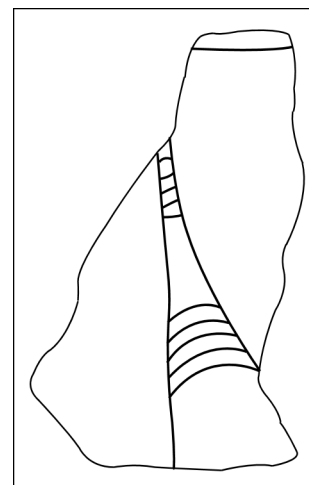


Figure 45. Decorative elements on Avery Engraved vessel section in Zone H.

The eighth and ninth vessel sections in Zone H are from grog and grog-bone-tempered Avery Engraved compound bowls, probably *var. Graves* (Schambach and Miller 1984:119). The first of these, found in Feature 18, has red-slipped interior and exterior surfaces, and a semi-circular motif on the lower panel; one of these motifs is notable because the innermost semi-circle has open pendant triangles (Figure 46). Dividing the semi-circles are sets of closely-spaced vertical engraved lines. The second Avery Engraved compound bowl also has a central semi-circular motif, except the central element within the principal semi-circle is a diamond-shaped element with excised rays (Figure 47). The outermost semi-circle has diagonal tick marks. Excised or cross-hatched curvilinear brackets divide the lower panel into sections with the semi-circle elements.

The 10th vessel section in Zone H includes rim and body sherds from a grog-tempered Simms Engraved carinated bowl. The vessel has been burnished on its exterior and smoothed on its interior surface, and it has a red slip on both vessel surfaces. The rim is 5.1 mm thick, and the vessel body walls are 6.4 mm thick. The rim panel has a series of closely-spaced vertical engraved lines, from one to five vertical engraved lines (Figure 48).

The 11th vessel section in Features 19-20 in Zone H is a grog-tempered Bowie Engraved carinated bowl with a 3.6 cm rim height. Both vessel surfaces have been burnished, and rim and body wall

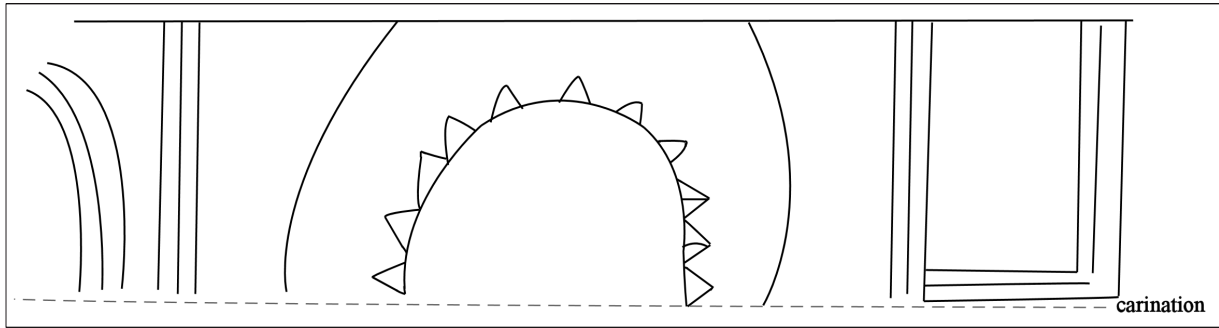


Figure 46. Decorative elements on an Avery Engraved compound bowl vessel section from Feature 18 in Zone H.

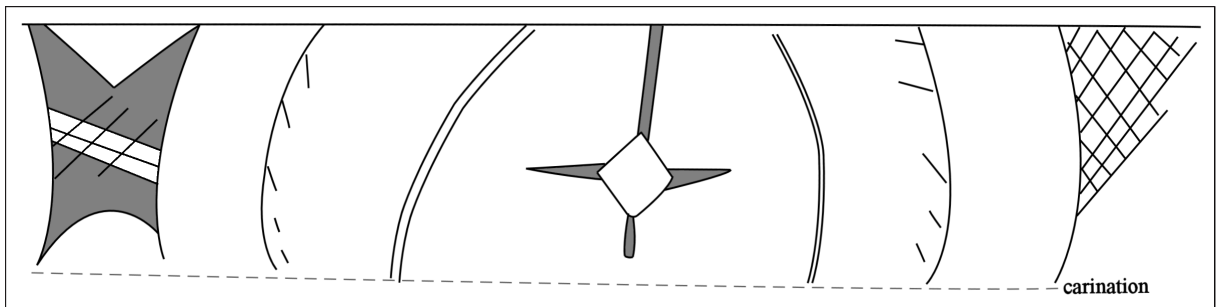


Figure 47. Decorative elements on an Avery Engraved compound bowl (F.S. 1001, 1017, and 1029) vessel section in Zone H.

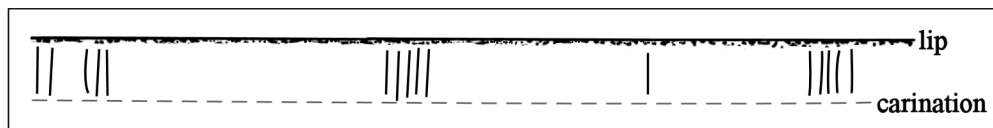


Figure 48. Decorative elements on a Simms Engraved carinated bowl vessel section in Zone H.

thickness ranges from 5.6-5.9 mm; the base is 7.6 mm thick and has an 8.1 cm diameter. The rim panel has a series of slanted scroll-like zones filled with sets of four or five closely-spaced vertical engraved lines (Figure 49). The uppermost scroll-like zone has a central semi-circle flanked by sets of four or five vertical engraved lines. A white clay pigment has been rubbed in the engraved lines.

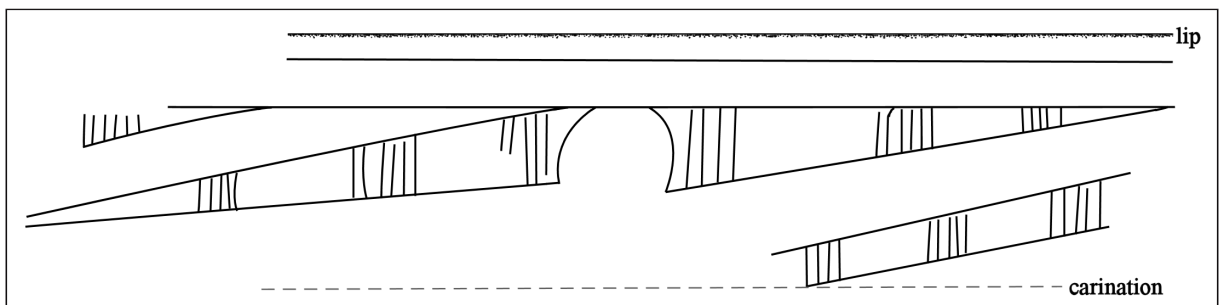


Figure 49. Decorative elements on Bowie Engraved carinated bowl vessel section in Features 19-20 in Zone H.

The last vessel section in Zone H includes rim sherds from a grog-tempered bowl or carinated bowl with a scalloped lip. The rim is decorated with at least two horizontal engraved lines, and a white pigment has been rubbed in the engraved lines.

Below Zone H

The below Zone H deposits have five ceramic vessel sections. The first is a grog-tempered Moore Noded bowl (see Webb 1959:Figure 122a) with four rows of applied nodes on the rim as well as 29-30 mm wide applied rattle nodes; the nodes remain full with whatever was used to create the rattle sound. The second vessel section in these deposits are rim and body sherds to a grog-tempered bottle, possibly an unspecified variety of Avery Engraved. The neck of the bottle is plain, but there are three horizontal engraved lines on the upper body, above a continuous series of engraved semi-circles in a zone above the carinated body (Figure 50).

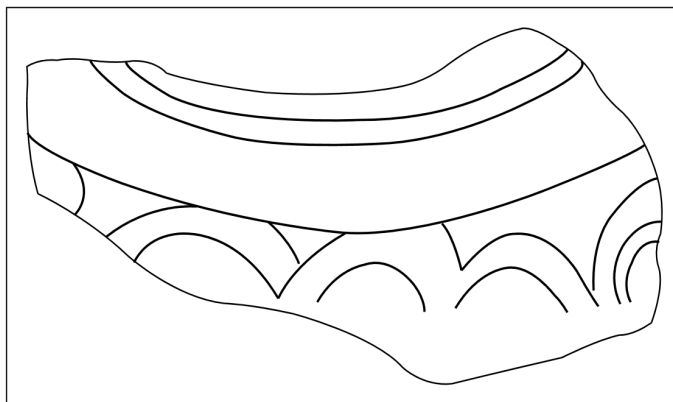


Figure 50. Decorative elements on engraved bottle vessel section from the below H zone.

The third vessel section from the below Zone H deposits includes rim sherds from a grog-tempered carinated bowl. The rims have at least two horizontal engraved lines, and this vessel section likely represents the upper part of a Barkman Engraved vessel. The fourth vessel section from the below Zone H deposits also includes one rim sherd from Zone H, while the other rim sherds are from below Zone H. The rim sherds are from a grog-tempered carinated bowl with a set of six horizontal and horizontal-curvilinear engraved lines (Figure 51).

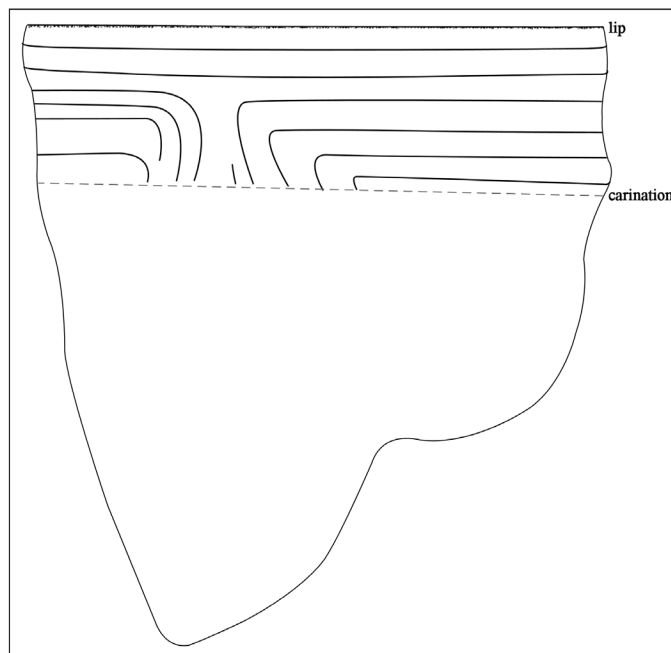


Figure 51. Decorative elements on engraved carinated bowl vessel section from below Zone H.

Above Zone I

There are three ceramic vessel sections in Above Zone I deposits. The first is from a Barkman Engraved carinated bowl:

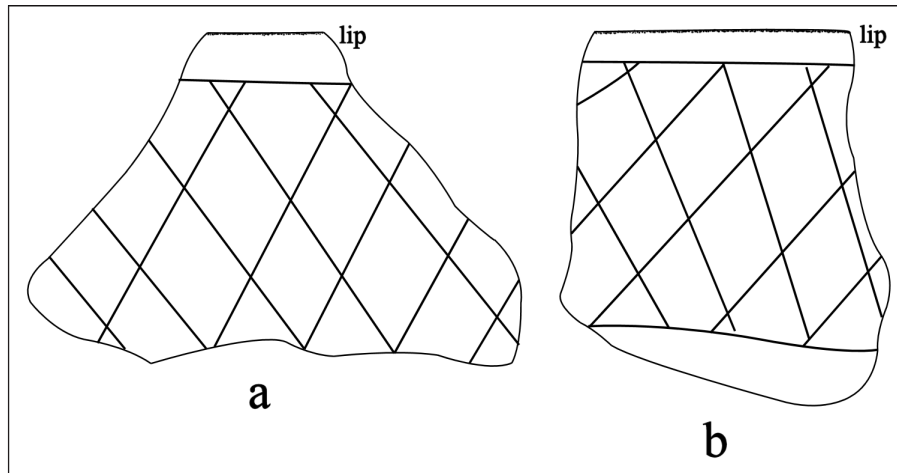


Figure 52. Decorative elements on engraved vessel section from below Zone H.

VESSEL NO.: F.S. 1596, above Zone I in the platform mound

VESSEL FORM: Carinated bowl

NON-PLASTICS AND PASTE: grog

RIM AND LIP FORM: Inverted rim and rounded lip

CORE COLOR: G (fired in a reducing environment and cooled in the open air)

INTERIOR SURFACE COLOR: dark grayish-brown; fire clouds on the body; vessel appears to have been refired

EXTERIOR SURFACE COLOR: yellowish-brown; fire clouds on the rim, body, and base

WALL THICKNESS (IN MM): rim, 6.3 mm; body, 6.4 mm

INTERIOR SURFACE TREATMENT: smoothed

EXTERIOR SURFACE TREATMENT: burnished

HEIGHT (IN CM): 10.8

ORIFICE DIAMETER (IN CM): 15.4

DIAMETER AT BOTTOM OF RIM OR NECK (IN CM): 15.9

BASE DIAMETER (IN CM) AND SHAPE OF BASE: 5.7 cm; circular and rounded

ESTIMATED VOLUME (IN LITERS): 1.0

DECORATION (INCLUDING MOTIF AND ELEMENTS WHEN APPARENT): The upper part of the rim has two horizontal engraved lines. The remainder of the rim panel has a repeating set of four oval-shaped zones connected to horizontal engraved lines above and below it by cross-hatched engraved brackets (Figure 53).

The oval-shaped zones each have a single central horizontal engraved line with downward-pointing excised tick marks. The oval-shaped zones are separated from each other by sets of three closely-spaced curvilinear engraved lines.

PIGMENT USE AND LOCATION ON VESSEL: none

TYPE AND VARIETY (IF KNOWN):
Barkman Engraved



Figure 53. Barkman Engraved carinated bowl section (F.S. 1596), above Zone I in the platform mound at the Hatchel site.

The second vessel section is from a grog-tempered Simms Engraved carinated bowl with a red slip on both vessel surfaces. The rim panel itself has a series of vertically hatched bracket elements that divide the rim into a series of undecorated sections (Figure 54).

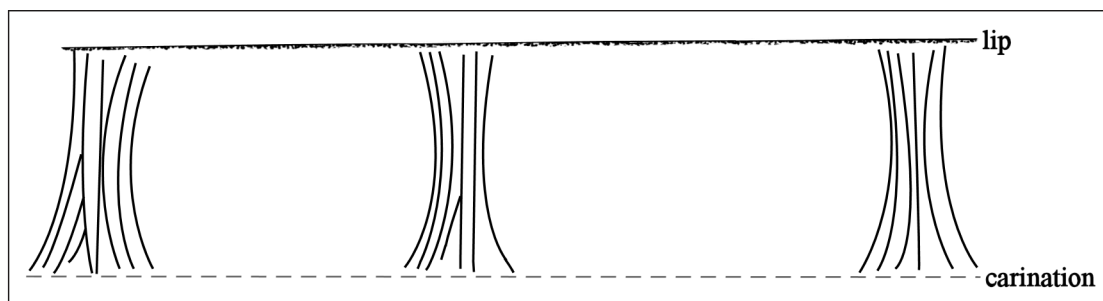


Figure 54. Decorative elements on Simms Engraved vessel section in above Zone I deposits.

The last of the above Zone I vessel sections is a shell-tempered jar comprised of rim, lower rim, and body sherds. The jar has lip tabs, while the rim is decorated with at least three widely-spaced rows of tool punctations and vertical applied ridges below the lip tabs. The body of the vessel also has vertical applied ridges.

No Zone Associations

Five vessel sections are from archaeological deposits that cannot be assigned to one of the recognized zones in the platform mound. These come from areas along the periphery of the mound, and thus cannot be definitely linked to zone/floor deposits. Their provenience is described by level and layer, with five 1 ft. layers per level.

Level 1, layer 2

Three of these ceramic vessel sections are from level 1, layer 2. The first is a Belcher Engraved jar:

SITE NAME OR SITE NUMBER: Hatchel (41BW3)

VESSEL NO.: F.S. 1648, Square 25R 22 in the platform mound

VESSEL FORM: Jar with a short rim

NON-PLASTICS AND PASTE: grog

RIM AND LIP FORM: Everted rim and rounded lip

CORE COLOR: B (fired and cooled in a reducing environment)

INTERIOR SURFACE COLOR: black

EXTERIOR SURFACE COLOR: black

WALL THICKNESS (IN MM): rim, 4.2 mm

INTERIOR SURFACE TREATMENT: burnished

EXTERIOR SURFACE TREATMENT: burnished

HEIGHT (IN CM): 9.0

ORIFICE DIAMETER (IN CM): 7.8

DIAMETER AT BOTTOM OF RIM OR NECK (IN CM): 7.6

BASE DIAMETER (IN CM) AND SHAPE OF BASE: 5.1 cm; circular and rounded

ESTIMATED VOLUME (IN LITERS): 0.42

DECORATION (INCLUDING MOTIF AND ELEMENTS WHEN APPARENT): The vessel body has a concentric circle motif repeated four times around the vessel. The motif is comprised of several series of closely-spaced concentric lines around a central circle with an unidentified central element (Figure 55). The concentric circles are divided by a series of four engraved triangle elements with negative inner circles outlined by cross-hatched zones.

PIGMENT USE AND LOCATION ON VESSEL: none

TYPE AND VARIETY (IF KNOWN): cf. Belcher Engraved, *var. Ogden* (Schambach and Miller 1984:120)

The second vessel section in Level 1, Layer 2 is comprised of 11 grog-tempered body sherds from a vessel with a red slip on both interior and exterior vessel surfaces. The third vessel section includes two grog-tempered rim sherds from a plain jar that has been refired from exposure to heat.

The one vessel section in Level 1, Layer 3 includes plain body sherds from a grog-tempered jar.

The last vessel section with no zone association is from Level 2, Layer 5. It includes body and base sherds from a grog-tempered vessel smoothed on both interior and exterior surfaces. The vessel height is at least 7.9 cm, and it has an 8.1 cm diameter flat base. The body walls are 6.4 mm thick.



Figure 55. cf. Belcher Engraved, var. *Ogden* jar (F.S. 1648) in the platform mound at the Hatchel site. Photograph courtesy of TARL.

Ceramic Vessel Sherds: Their Overall Character in Mound Zones

In addition to the ceramic vessels and ceramic vessel section, there are 15,041 plain and decorated ceramic vessel sherds recovered in the WPA excavations of the platform mound at the Hatchel site (Table 1). This includes 9818 plain rim, body, and base sherds, 2507 utility ware rim and body sherds, and 2718 fine ware rim and body sherds.

Table 1. The ceramic sherd assemblage from the Hatchel site platform mound excavations by zone, ware, and temper.

Ware/ Zone	Temper				N
	Grog	Grog-bone	Bone	Shell	
Plain Ware					
Zone A	244	8	4	27	283
Zone A, Fea. 1	116	7	1	7	131
Zone A, Fea. 2	11	-	3	-	14
Zone, Fea. 3	87	6	2	7	102
Zone A subtotal	458	21	10	41	530
Below Zone A	1	-	-	-	1
Zone B	1	-	-	-	1
Zone B, Fea. 4	348	16	13	18	395
Zone B, Fea. 5	29	1	-	-	30
Zone B, Fea. 6	95	4	1	4	104
Zone B subtotal	473	21	14	22	530
Zone C	44	2	1	4	51
Zone C, Fea. 7	56	4	1	3	64
Zone C, Fea. 8	58	4	-	3	65
Zone C, Fea. 9	5	-	-	-	5
Zone C subtotal	163	10	2	10	185
Zone D	141	5	-	1	147
Zone D, Fea. 11	13	3	1	1	18
Zone D, Fea. 12	79	4	-	5	88
Zone D subtotal	233	12	1	7	253
Zone E	254	13	1	19	287
Zone E, Fea. 13	21	-	2	1	24
Zone E, Fea. 14	137	4	-	4	145

Table 1. The ceramic sherd assemblage from the Hatchel site platform mound excavations by zone, ware, and temper, cont.

Ware/ Zone	Temper				N
	Grog	Grog-bone	Bone	Shell	
Zone E subtotal	412	17	3	24	456
Zone F	662	43	2	16	723
Zone F, Fea. 15	50	7	-	1	58
Zone F subtotal	712	50	2	17	781
Zone G	1079	56	8	51	1194
Zone G, Fea. 22	112	12	2	8	134
Zone G subtotal	1191	68	10	59	1328
Below G	1	-	-	1	2
Zone H	2041	120	8	75	2244
Zone H, Fea. 16	48	1	-	3	52
Zone H, below F. 16	3	-	-	-	3
Zone H, Fea. 17	3	-	-	-	3
Zone H, Fea. 18	382	19	2	13	416
Zone H, Fea. 19/20	614	25	2	28	669
Zone H, Fea. 21	4	-	-	1	5
Zone H, below F. 19/20	74	2	-	5	81
Zone H subtotal	3169	167	12	125	3473
Zone below H	817	39	3	29	888
Zone above I	269	19	3	22	313
Zone below H/ Zone above I subtotal	1086	58	6	51	1201
Zone I	81	5	1	1	88
Zone J	44	4	-	-	48
Above Zone K	28	3	1	1	33
Zone K	16	2	-	-	18
Zone K, Fea. 25	24	1	-	-	25

Table 1. The ceramic sherd assemblage from the Hatchel site platform mound excavations by zone, ware, and temper, cont.

Ware/ Zone	Temper				N
	Grog	Grog-bone	Bone	Shell	
Zone K subtotal	40	3	-	-	43
Below K	1	-	-	-	1
Unassigned Zone	778	45	6	38	867
Plain ware, subtotal	8868	484	68	396	9816
Utility Ware					
Zone A	58	5	2	7	72
Zone A, Feature 1	23	1	1	5	30
Zone A, Feature 2	2	-	-	-	2
Zone A, Feature 3	14	1	-	-	15
Subtotal, Zone A	97	7	3	12	119
Below Zone A	1	-	-	-	1
Zone B, Feature 4	75	5	5	7	92
Zone B, Feature 5	13	1	-	-	14
Zone B, Feature 6	25	1	-	-	26
Subtotal, Zone B	113	7	5	7	132
Zone C	8	-	1	1	10
Zone C, Feature 7	14	-	1	1	16
Zone C, Feature 8	9	1	-	-	10
Zone C, Feature 9	1	-	-	-	1
Subtotal, Zone C	32	1	2	2	37
Zone D	41	5	1	-	47
Zone D, Feature 11	3	1	-	-	4
Zone D, Feature 12	14	-	-	-	14
Subtotal, Zone D	58	6	1	-	65
Zone E	63	4	-	4	71
Zone E, Feature 13	4	1	-	-	5
Zone E, Feature 14	23	1	-	-	24

Table 1. The ceramic sherd assemblage from the Hatchel site platform mound excavations by zone, ware, and temper, cont.

Ware/ Zone	Temper			Shell	N
	Grog	Grog-bone	Bone		
Subtotal, Zone E	90	6	-	4	100
Zone F	240	19	7	10	276
Zone F, Feature 15	14	-	-	1	15
Subtotal, Zone F	254	19	7	11	291
Zone G	237	21	2	14	274
Zone G, Feature 22	34	4	-	1	39
Subtotal, Zone G	271	25	2	15	313
Zone H	465	38	3	26	532
Zone H, Feature 16	8	-	-	-	8
Zone H, Below Feature 16	2	-	-	-	2
Zone H, Feature 17	-	-	-	-	-
Zone H, Feature 18	80	2	-	4	86
Zone H, Fea. 19/20	118	16	-	8	142
Zone H, Feature 21	2	-	-	-	2
Zone H, Below Fea. 19/20	17	1	-	2	20
Subtotal, Zone H	692	57	3	40	792
Zone below H	163	9	1	13	186
Zone above I	122	5	-	10	137
Zone I	24	1	-	1	26
Zone J	19	2	1	-	22
Above K	6	1	-	-	7
Zone K	6	-	-	-	6
Zone K, Feature 25	3	-	-	-	3
Subtotal, Zone K	9	-	-	-	9
Below Zone K	1	-	-	-	1

Table 1. The ceramic sherd assemblage from the Hatchel site platform mound excavations by zone, ware, and temper, cont.

Ware/ Zone	Temper				N
	Grog	Grog-bone	Bone	Shell	
No Zone	241	19	2	8	270
Utility ware, Subtotal	2192	165	27	123	2507
Fine Ware					
Zone A	54	2	2	4	62
Zone A, Feature 1	29	1	1	3	34
Zone A, Feature 2	4	-	-	-	4
Zone A, Feature 3	14	2	-	-	16
Subtotal, Zone A	101	5	3	7	116
Zone B	3	-	-	-	3
Zone B, Feature 4	82	2	1	6	91
Zone B, Feature 5	4	1	-	1	6
Zone B, Feature 6	26	-	-	2	28
Subtotal, Zone B	115	3	1	9	128
Zone C	6	1	-	5	12
Zone C, Feature 7	9	1	-	-	10
Zone C, Feature 8	15	-	-	3	18
Zone C, Feature 9	1	-	-	2	3
Subtotal, Zone C	31	2	-	10	43
Zone D	27	3	1	5	36
Zone D, Feature 11	1	-	1	1	3
Zone D, Feature 12	18	-	1	1	20
Subtotal, Zone D	46	3	3	7	59
Zone E	63	5	1	3	72
Zone E, Feature 13	1	-	1	-	2
Zone E, Feature 14	12	1	-	-	13
Subtotal, Zone E	76	6	2	3	87
Zone F	137	11	6	17	171
Zone F, Feature 15	7	-	-	-	7

Table 1. The ceramic sherd assemblage from the Hatchel site platform mound excavations by zone, ware, and temper, cont.

Ware/ Zone	Temper				N
	Grog	Grog-bone	Bone	Shell	
Subtotal, Zone F	144	11	6	17	178
Zone G	319	24	6	15	364
Zone G, Feature 22	31	2	-	1	34
Subtotal, Zone G	350	26	6	16	398
Below Zone G	1	-	-	-	1
Zone H	714	35	22	38	810*
Zone H, Feature 16	7	-	2	-	9
Zone H, Below Feature 16	4	-	-	-	4
Zone H, Feature 17	3	-	-	-	3
Zone H, Feature 18	90	10	4	8	112
Zone H, Fea. 19/20	199	10	3	10	222
Zone H, Feature 21	1	-	-	-	1
Zone H, below Fea. 19/20	26	-	-	-	26
Subtotal, Zone H	1044	55	31	56	1186
Zone below H	235	13	1	10	259
Zone above I	43	3	-	3	49
Zone I	16	-	-	-	16
Zone J	13	3	-	1	17
Above Zone K	4	-	1	-	5
Zone K	4	-	-	-	4
Zone K, Feature 25	1	-	-	-	1
Subtotal, Zone K	5	-	-	-	5
below Zone K	1	-	-	-	1
Unassigned Zone	141	10	5	11	167

Table 1. The ceramic sherd assemblage from the Hatchel site platform mound excavations by zone, ware, and temper, cont.

Ware/ Zone	Temper				N
	Grog	Grog-bone	Bone	Shell	
No Provenience	3	-	-	-	3
Totals	2369	140	59	150	2718
Totals, All Wares	13,429	789	154	669	15,041

* include one painted non-tempered sherd

In the analysis of the sherds, the focus was on (1) the temper of each of the vessel sherds, (2) the type of sherd (i.e., rim, body, base, lower rim-body, etc.), including any vessel appendages, and (3) the decorative method and elements present on sherds from either utility ware (i.e., sherd from vessels with wet paste decorations, including brushing, incising, punctations, etc.) or fine ware (i.e., sherds from vessels with hard paste engraved decoration, vessels with a slip or painted element, and certain trailed decorative elements) vessels.

Overall, the highest densities of sherds in the mound zones are in Zones G and H, the initial mound zones above the primary platform (i.e., zones I and J) (see Figure 3). Approximately 50 percent of the sherds from the Hatchel mound excavations are from these two zones, followed by the below Zone H deposits (8.9 percent), Zone F (8.3 percent), Zone B (5.3 percent), and Zone A (5.1 percent). The archaeological deposits below the mound—Zone K and below Zone K—only have 60 sherds (0.4 percent of the sherd assemblage).

Temper Use

About 89 percent of the sherds in the Hatchel mound excavations are from vessels tempered only with grog (i.e., crushed sherds) (see Table 1). Another 5.2 percent are from vessels tempered with grog and crushed and burned bone; only 1.0 percent of the vessel sherds are tempered with burned bone. Ceramic sherds from vessels tempered with burned and crushed mussel shell comprise only 4.5 percent of the sherd assemblage. The sherds from vessels tempered with shell are from vessels that were not produced locally, but were made by Caddo potters in Belcher phase and other communities downstream some distance from the Hatchel site (Perttula et al. 2012:Figure 2; Selden et al. 2014:Figure 4), or in McCurtain phase communities about 100 km to the northwest.

There is very little difference in the use of tempers in the plain ware, utility ware, and fine ware vessel sherds in the platform mound deposits. Grog temper is present in between 87.0-90.3 percent of the sherds in the three wares, and the proportion of grog-bone-tempered vessel sherds ranges from only 5.0-6.6 percent in the three wares. Bone-tempered sherds comprise between 0.7-2.2 percent of the different wares, and shell-tempered sherds comprise between 4.0-5.6 percent of the plain ware, utility ware, and fine ware vessel sherds.

The assemblages with the highest proportion of grog-tempered vessel sherds are either in Zone K under the platform mound (95.0 percent) or in the zones that are associated with the initial mound platform: Zone I (93.1 percent) and below Zone H (91.1 percent). Conversely, the zones with the highest proportion of grog-bone-tempered vessel sherds are either in Zone F (6.9 percent) and Zone G (5.8 percent) in the second mound platform, or in Zone J (10.3 percent) in the initial mound platform. The few sherds from bone-tempered vessels are concentrated in Zones A-C at the top of the second mound platform, although the proportions of bone-tempered sherds in these zones only ranges from 1.5-2.5 percent. Sherds from shell-tempered vessels are also concentrated in Zones A-C, represented by between 4.8-7.8 percent of the sherds in these zones. About 6.9 percent of the sherds in the Zone Above I in the first mound platform are shell-tempered. Although the sample of sherds from Zone K and below Zone K is small (n=60), it is notable that there are no shell-tempered vessel sherds in these below mound deposits.

Plain Wares

Rims from plain ware vessels are common in the vessel sherds from the Hatchel site mound excavations. Mound zones G and H have the highest number of plain rim sherds, but these zones also have the highest number of total sherds. The zones with the highest proportion of rim sherds to all sherds include Zone C (1:38) near the top of the second mound platform, and zones above I (1:39), I (1:43), above K (1:45), and in Zone K (1:30); plain rimmed vessels were proportionally most abundant in the zone under the first platform mound and in zones in the first platform mound.

More than 6 percent of the grog-tempered rim sherds are from bottles with plain necks (Table 2). The plain bottle rims are confined to zones G, H, and below H, the first zones in the second platform mound. Vessels with plain rims and lug handles are both grog-tempered and shell-tempered; these rim sherds comprise 2.2 percent of all the rims; lug handled rim sherds occur only in Zones A-B and Zones H and above I (see Table 2). Three plain grog-tempered rim sherds in Zone H have either a scalloped lip, lip tabs, or an interior thickened rim.

More than 95 percent of all the plain rims in the assemblage are from grog-tempered vessels (see Table 2). Only 3.3 percent of the plain rims are from grog-bone-tempered vessels, and another 1.1 percent are from shell-tempered vessels. The ratio of plain rims to all the decorated sherds by temper indicate that the highest proportion of plain-rimmed vessels were grog-tempered (1:27), while a much lower proportion of plain rims characterize the grog-bone-tempered (1:51) and shell-tempered (1:137) wares. It is likely that the vast majority of these tempered wares are vessels with decorative elements on the rim, unlike the grog-tempered wares. None of the bone-tempered sherds in the assemblage are from plain-rimmed vessels.

In comparing the plain rims to the decorated rims from utility ware and fine ware vessels in the mound zones (see below in Tables 3 and 4), zones A-D have the highest relative proportion of plain rims in the various assemblages: 24-39 percent of the rims are from plain wares (44 of 156 rims, or 28 percent for the zones combined). Utility ware rims (n=44, 28 percent) and fine ware rims (n=68, 44 percent) comprise the majority of the rims in these zones. In zones E to Zone Below H, 112 of the 853 rims (13 percent) in this part of the platform mound are from plain wares. More than 57 percent of the rims in these zones are from fine wares compared to 30 percent that are utility ware rims. The proportion of plain rims in Zone Above I to Zone J is 28 percent (17 of 60 rims). Only 42 percent of the rims in these zones are from fine wares, and 30 percent are from utility ware vessels.

Table 2. Plain ware rim sherds from the Hatchel platform mound by temper and zone.

Zone	Grog rim	Grog-bone rim	Bone rim	Shell rim
A	14	1	-	1*
B	14*	-	-	-
C	6	1	-	-
D	6	1	-	-
E	6	-	-	-
F	11	-	-	-
G	27+	-	-	-
H	57++ * # & @	3	-	1
below H	11^	-	-	-
above I	13*	-	-	-
I	3	-	-	-
J	1	-	-	-
above K	1	-	-	-
K	2	-	-	-
Totals	172	6	-	2

*one rim with a lug handle

+includes one bottle rim sherd

^includes three bottle rim sherds

++includes seven bottle rim sherds

#one rim with a scalloped lip

&one rim with lip tabs

@one rim with interior thickened lip

Lastly, zones above K and Zone K have 16 rims, 19 percent of which are plain. These zones have the highest proportion of utility ware rims (56 percent), and fine ware rims comprise only 25 percent of the rim assemblage.

Utility Wares

The utility ware rim and body sherds from the Hatchel mound excavations include sherds from vessels with a wide variety of decorative methods and combinations of decorative elements, as well as different tempers (Table 3). Sherds from vessels with incised decorations are the most common in the utility wares (20.1 percent), followed by brushed sherds (19.0 percent), sherds with applied elements (13.8 percent), and trailed sherds from Foster Trailed-Incised vessels (7.4 percent).

Table 3. Utility ware sherds from the Hatchel platform mound by temper, sherd type, decorative method, and zone.

Decorative Method	Grog		Grog-bone		Bone		Shell	
	rim	body	rim	body	rim	body	rim	body
<i>Appliqued</i>								
Zone A	-	12	-	1	-	-	-	2
Zone B	-	9	-	2	-	-	-	1
Zone C	-	2	-	-	-	1	-	1
Zone D	1	6	-	1	-	-	-	-
Zone E	-	8	-	-	-	-	-	3
Zone F	-	19	-	2	-	-	-	1
Zone G	1	38	-	1	-	-	-	5
Zone H	3	115	-	10	-	-	2	10
Zone Below H	3	26	-	-	-	-	-	5
Zone Above I	1	11	-	-	-	-	-	1
Zone I	-	4	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	1	1	-	1	-	-	-	-
Zone K	-	1	-	-	-	-	-	-
SUBTOTAL	10	252	-	18	-	1	2	29
<i>Appliqued-Incised</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	1	-	-	-	-	-	-
Zone C	-	1	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	1	-	-	-	-	-	-
Zone G	-	5	-	-	-	-	-	-
Zone H	1	20	-	2	-	-	-	1
Zone Below H	-	4	-	1	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	1	32	-	3	-	-	-	1
<i>Appliqued-fingernail punctated</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	-	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	1	-	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	-

Table 3. Utility ware sherds from the Hatchel platform mound by temper, sherd type, decorative method, and zone, cont.

Decorative Method	Grog		Grog-bone		Bone		Shell	
	rim	body	rim	body	rim	body	rim	body
Zone G	-	-	-	-	-	-	-	-
Zone H	-	-	-	-	-	-	-	1
Zone Below H	-	-	-	-	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	1	-	-	-	-	-	-	1
<i>Appliqued-tool punctated</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	1	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	1	-	-	-	-	-	1
Zone G	1	-	-	-	-	-	-	-
Zone H	-	-	-	-	-	-	-	-
Zone Below H	-	-	-	-	-	-	-	1
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	1	2	-	-	-	-	-	2
<i>Appliqued-punctated-incised</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	-	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	-
Zone G	-	1	-	-	-	-	-	-
Zone H	-	-	-	-	-	-	-	1
Zone Below H	-	1	-	-	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-

Table 3. Utility ware sherds from the Hatchel platform mound by temper, sherd type, decorative method, and zone, cont.

Decorative Method	Grog		Grog-bone		Bone		Shell	
	rim	body	rim	body	rim	body	rim	body
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	-	2	-	-	-	-	-	1
<i>Brushed</i>								
Zone A	3	14	-	-	-	1	-	1
Zone B	2	23	-	4	-	2	-	1
Zone C	-	5	-	-	-	-	-	-
Zone D	1	3	-	1	-	-	-	-
Zone E	4	15	1	-	-	-	-	-
Zone F	7	67	-	6	-	1	-	2
Zone G	7	59	1	9	-	-	-	3
Zone H	17	64	1	10	-	-	-	2
Zone Below H	6	21	1	-	-	1	-	-
Zone Above I	2	53	-	2	-	-	-	-
Zone I	2	1	-	-	-	-	-	1
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	2	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	51	327	4	32	-	5	-	10
<i>Brushed-Appliqued</i>								
Zone A	-	2	-	-	-	-	-	-
Zone B	-	1	-	-	-	-	-	-
Zone C	-	1	-	-	-	-	-	-
Zone D	-	1	1	-	-	-	-	-
Zone E	-	1	-	-	-	-	-	-
Zone F	-	4	-	-	-	2	-	1
Zone G	1	18	-	2	-	1	-	-
Zone H	3	49	-	1	-	1	-	-
Zone Below H	-	6	-	-	-	-	-	-
Zone Above I	-	1	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	4	84	1	3	-	4	-	1
<i>Brushed-Appliqued-Incised</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	-	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-

Table 3. Utility ware sherds from the Hatchel platform mound by temper, sherd type, decorative method, and zone, cont.

Decorative Method	Grog		Grog-bone		Bone		Shell	
	rim	body	rim	body	rim	body	rim	body
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	-
Zone G	-	-	-	-	-	-	-	-
Zone H	4	-	-	-	-	-	-	-
Zone Below H	-	-	-	-	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	4	-	-	-	-	-	-	-
<i>Brushed-Applied-Tool Punctated</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	-	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	-
Zone G	-	1	-	1	-	-	-	-
Zone H	-	1	-	-	-	-	-	-
Zone Below H	-	-	-	-	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	-	2	-	1	-	-	-	-
<i>Brushed-Incised</i>								
Zone A	-	13	-	-	-	-	-	-
Zone B	-	12	-	1	-	-	-	-
Zone C	-	1	-	-	-	-	-	-
Zone D	-	5	-	-	-	-	-	-
Zone E	1	12	-	1	-	-	-	-
Zone F	-	38	-	4	-	1	-	1
Zone G	2	12	-	1	-	-	-	-
Zone H	3	22	-	2	-	-	-	-
Zone Below H	-	8	-	1	-	-	-	-
Zone Above I	-	12	-	-	-	-	-	-

Table 3. Utility ware sherds from the Hatchel platform mound by temper, sherd type, decorative method, and zone, cont.

Decorative Method	Grog		Grog-bone		Bone		Shell	
	rim	body	rim	body	rim	body	rim	body
Zone I	-	2	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	6	137	-	10	-	1	-	1
<i>Brushed-Incised-Punctated</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	2	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	-
Zone G	-	-	-	-	-	-	-	-
Zone H	-	-	-	-	-	-	-	-
Zone Below H	-	-	-	-	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	-	2	-	-	-	-	-	-
<i>Brushed-Punctated</i>								
Zone A	-	1	-	-	-	-	-	-
Zone B	-	1	1	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	1	2	-	-	-	-	-	-
Zone G	-	-	1	-	-	-	-	-
Zone H	-	4	-	1	-	-	-	-
Zone Below H	-	2	-	-	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	1	10	2	1	-	-	-	-

Table 3. Utility ware sherds from the Hatchel platform mound by temper, sherd type, decorative method, and zone, cont.

Decorative Method	Grog		Grog-bone		Bone		Shell	
	rim	body	rim	body	rim	body	rim	body
<i>Incised</i>								
Zone A	2	23	-	3	1	1	-	1
Zone B	4	24	-	1	-	1	-	2
Zone C	1	10	-	-	-	-	-	-
Zone D	3	18	-	2	-	-	-	-
Zone E	3	21	1	2	-	-	-	-
Zone F	2	32	1	1	-	-	-	-
Zone G	8	42	-	5	-	-	-	-
Zone H	26	113	2	8	-	1	1	2
Zone Below H	6	28	-	2	-	-	-	-
Zone Above I	1	15	-	2	-	-	-	-
Zone I	2	9	-	-	-	-	-	-
Zone J	-	7	1	-	-	-	-	-
Zone Above K	1	1	-	-	-	-	-	-
Zone K	6	5	-	-	-	-	-	-
SUBTOTAL	65	348	5	26	1	3	1	5
<i>Incised-Punctated</i>								
Zone A	-	2	-	-	-	-	1	4
Zone B	1	4	-	-	-	1	-	-
Zone C	1	2	-	1	-	1	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	2	2	-	-	-	-	-	-
Zone F	-	5	-	1	-	-	-	-
Zone G	4	11	-	-	-	-	-	2
Zone H	7	29	1	1	-	-	-	-
Zone Below H	5	13	1	-	-	-	-	-
Zone Above I	1	1	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	1	4	-	-	-	1	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	1	-	-	-	-	-	-	-
SUBTOTAL	23	73	2	3	-	3	1	6
<i>Neck Banded</i>								
Zone A	2	4	1	-	-	-	-	-
Zone B	2	5	-	-	-	1	-	-
Zone C	-	1	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	3	1	-	-	-	1	-
Zone F	4	7	-	-	-	-	-	1

Table 3. Utility ware sherds from the Hatchel platform mound by temper, sherd type, decorative method, and zone, cont.

Decorative Method	Grog		Grog-bone		Bone		Shell	
	rim	body	rim	body	rim	body	rim	body
Zone G	6	15	-	-	-	-	-	1
Zone H	11	26	-	1	-	-	4	8
Zone Below H	2	7	-	-	-	-	1	1
Zone Above I	-	2	-	-	-	-	-	2
Zone I	1	-	-	-	-	-	-	1
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	28	70	2	1	-	1	6	14
<i>Neck Banded-Appliqued</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	-	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	-
Zone G	-	-	-	-	-	-	-	-
Zone H	2	-	-	-	-	-	-	-
Zone Below H	-	-	-	-	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	2	-	-	-	-	-	-	-
<i>Neck Banded-appliqued-incised</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	-	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	-
Zone G	-	-	-	-	-	-	-	-
Zone H	-	-	-	-	-	-	-	-
Zone Below H	-	-	-	-	-	-	-	1
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-

Table 3. Utility ware sherds from the Hatchel platform mound by temper, sherd type, decorative method, and zone, cont.

Decorative Method	Grog		Grog-bone		Bone		Shell	
	rim	body	rim	body	rim	body	rim	body
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	-	-	-	-	-	-	-	1
<i>Neck Banded-brushed-appliqued</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	-	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	-
Zone G	-	-	-	-	-	-	1	-
Zone H	-	-	-	-	-	-	-	-
Zone Below H	-	-	-	-	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	-	-	-	-	-	-	1	-
<i>Neck Banded-Incised</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	-	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	1	-	-	-	-	-	-
Zone G	-	-	-	-	-	-	-	-
Zone H	1	-	-	-	-	-	-	-
Zone Below H	-	-	-	-	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	1	1	-	-	-	-	-	-
<i>Punctated, cane</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	-	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-

Table 3. Utility ware sherds from the Hatchel platform mound by temper, sherd type, decorative method, and zone, cont.

Decorative Method	Grog		Grog-bone		Bone		Shell	
	rim	body	rim	body	rim	body	rim	body
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	-
Zone G	-	-	-	-	-	-	-	-
Zone H	-	1	-	1	-	-	-	-
Zone Below H	-	-	-	-	-	-	-	-
Zone Above I	-	1	-	1	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	-	2	-	2	-	-	-	-
<i>Punctated, circular</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	-	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	-
Zone G	-	-	-	-	-	-	-	-
Zone H	-	-	-	-	-	-	-	-
Zone Below H	-	-	1	-	-	-	-	-
Zone Above I	-	1	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	-	1	1	-	-	-	-	-
<i>Punctated, fingernail</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	1	3	-	-	-	-	1	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	1	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	1	-	-	-	-	-	-
Zone G	2	1	-	-	-	-	-	-
Zone H	1	7	-	1	-	-	1	-
Zone Below H	-	5	-	2	-	-	1	1

Zone Above I - - - - - - 1 -

Table 3. Utility ware sherds from the Hatchel platform mound by temper, sherd type, decorative method, and zone, cont.

Decorative Method	Grog		Grog-bone		Bone		Shell	
	rim	body	rim	body	rim	body	rim	body
Zone I	2	-	-	-	-	-	-	-
Zone J	1	1	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	7	19	-	3	-	-	4	1
<i>Punctated, fingernail-tool</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	-	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	-
Zone G	-	-	-	-	-	-	-	-
Zone H	-	-	-	-	-	-	-	-
Zone Below H	-	-	-	-	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	1	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	-	1	-	-	-	-	-	-
<i>Punctated, tool</i>								
Zone A	2	5	1	1	-	-	-	4
Zone B	-	5	-	-	-	-	-	1
Zone C	1	1	-	-	-	-	1	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	1	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	1
Zone G	2	4	-	-	-	-	1	-
Zone H	5	16	1	1	-	-	1	1
Zone Below H	-	4	-	-	-	-	1	-
Zone Above I	1	3	-	-	-	-	-	2
Zone I	1	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	12	39	2	2	-	-	3	10

Table 3. Utility ware sherds from the Hatchel platform mound by temper, sherd type, decorative method, and zone, cont.

Decorative Method	Grog		Grog-bone		Bone		Shell	
	rim	body	rim	body	rim	body	rim	body
<i>Ridged</i>								
Zone A	-	1	-	-	-	-	-	-
Zone B	-	-	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	2	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	-
Zone G	-	-	-	-	-	-	-	-
Zone H	-	14	-	2	-	-	-	-
Zone Below H	-	2	-	-	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	-	19	-	2	-	-	-	-
<i>Ridged-Brushed</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	1	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	1	-	-	-	-	-	-	-
Zone F	-	1	-	-	-	-	-	-
Zone G	-	5	-	-	-	-	-	-
Zone H	-	31	-	1	-	-	-	-
Zone Below H	-	5	-	-	-	-	-	-
Zone Above I	-	3	-	-	-	-	-	-
Zone I	-	1	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	1	47	-	1	-	-	-	-
<i>Ridged-Incised</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	-	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	-

Table 3. Utility ware sherds from the Hatchel platform mound by temper, sherd type, decorative method, and zone, cont.

Decorative Method	Grog		Grog-bone		Bone		Shell	
	rim	body	rim	body	rim	body	rim	body
Zone G	-	2	-	-	-	-	-	-
Zone H	-	26	-	-	-	-	-	-
Zone Below H	-	-	-	-	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	-	28	-	-	-	-	-	-
<i>Roughened</i>								
Zone A	2	-	-	-	-	-	-	-
Zone B	4	1	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	1	1	-	-	-	-	-	-
Zone E	2	3	1	-	-	-	-	-
Zone F	7	2	-	-	-	-	-	-
Zone G	6	5	1	1	-	-	-	-
Zone H	27	23	3	-	-	-	-	-
Zone Below H	3	-	-	-	-	-	-	-
Zone Above I	-	1	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	52	36	5	1	-	-	-	-
<i>Roughened-Appliqued</i>								
Zone A	1	-	-	-	-	-	-	-
Zone B	-	-	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	-
Zone G	-	-	-	-	-	-	-	-
Zone H	3	-	1	-	-	-	-	-
Zone Below H	1	-	-	-	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-

Table 3. Utility ware sherds from the Hatchel platform mound by temper, sherd type, decorative method, and zone, cont.

Decorative Method	Grog		Grog-bone		Bone		Shell	
	rim	body	rim	body	rim	body	rim	body
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	5	-	1	-	-	-	-	-
<i>Roughened-Brushed</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	-	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	-
Zone G	-	-	-	-	-	-	-	-
Zone H	-	-	1	-	-	-	-	-
Zone Below H	-	-	-	-	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	-	-	1	-	-	-	-	-
<i>Roughened-Incised</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	-	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	2	-	-	-	-	-	-
Zone G	-	-	-	-	-	-	-	-
Zone H	-	-	-	-	-	-	-	-
Zone Below H	-	-	-	-	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	-	2	-	-	-	-	-	-
<i>Stamped</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	-	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-

Table 3. Utility ware sherds from the Hatchel platform mound by temper, sherd type, decorative method, and zone, cont.

Decorative Method	Grog		Grog-bone		Bone		Shell	
	rim	body	rim	body	rim	body	rim	body
Zone D	-	-	-	-	-	-	-	-
Zone E	-	1	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	-
Zone G	-	-	-	-	-	-	-	-
Zone H	-	-	-	-	-	-	-	-
Zone Below H	-	-	-	-	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	-	1	-	-	-	-	-	-
<i>Trailed</i>								
Zone A	-	20	-	2	-	-	-	1
Zone B	-	21	-	4	-	-	-	-
Zone C	-	5	-	-	-	-	-	-
Zone D	-	8	-	1	-	2	-	-
Zone E	-	4	-	2	-	-	-	-
Zone F	-	9	-	2	-	-	-	2
Zone G	1	20	-	5	-	1	-	1
Zone H	2	20	-	6	-	1	-	3
Zone Below H	-	13	-	1	-	-	-	1
Zone Above I	-	7	-	-	-	-	-	1
Zone I	-	-	-	-	-	-	-	-
Zone J	-	1	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	3	128	-	23	-	4	-	9
<i>Trailed-Appliqued</i>								
Zone A	-	1	-	-	-	-	-	-
Zone B	-	-	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	2	-	-	-	-	-	-
Zone F	-	1	-	-	-	-	-	-
Zone G	-	1	-	-	-	-	-	-
Zone H	-	-	-	-	-	-	-	-
Zone Below H	-	-	-	-	-	-	-	-
Zone Above I	-	1	-	-	-	-	-	-

Table 3. Utility ware sherds from the Hatchel platform mound by temper, sherd type, decorative method, and zone, cont.

Decorative Method	Grog		Grog-bone		Bone		Shell	
	rim	body	rim	body	rim	body	rim	body
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	-	6	-	-	-	-	-	-
<i>Trailed-Brushed</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	-	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	1
Zone G	-	-	-	-	-	-	-	-
Zone H	-	-	-	-	-	-	-	-
Zone Below H	-	-	-	-	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	-	-	-	-	-	-	-	1
<i>Trailed-Incised</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	1	1	-	-	-	-	-	-
Zone C	-	1	-	-	-	-	-	-
Zone D	1	3	-	-	-	-	-	-
Zone E	-	3	-	-	-	-	-	-
Zone F	-	-	1	-	-	-	-	-
Zone G	-	1	1	-	-	-	-	-
Zone H	-	3	-	-	-	-	1	-
Zone Below H	-	-	-	-	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	1	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	2	12	2	1	-	-	1	-

Table 3. Utility ware sherds from the Hatchel platform mound by temper, sherd type, decorative method, and zone, cont.

Decorative Method	Grog		Grog-bone		Bone		Shell	
	rim	body	rim	body	rim	body	rim	body
<i>Trailed-Punctated</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	-	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	-
Zone G	-	1	-	-	-	-	-	-
Zone H	-	-	-	-	-	-	-	-
Zone Below H	-	-	-	-	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	-	1	-	-	-	-	-	-
Totals	280	1684	28	133	1	22	19	93

Differences in proportion and by presence-absence in the different utility ware decorative methods from zone to zone are illuminating; I will discuss these in more depth in the next section as I summarize the decorative methods and decorative elements represented in the utility wares zone by zone. The highest proportion of sherds with brushed-punctated, incised, tool punctated, trailed (Foster Trailed-Incised), and trailed-incised (Foster Trailed-Incised) decorative methods occur in Zones A-D at the top of the second platform mound (see Table 3). Sherds with applied-tool punctated and brushed-incised-punctated decorative methods are also present in Zones A-D.

In Zones E and/or F, the highest proportion of sherds with brushed (along with Zone I) and brushed-incised decorative elements occur. This is also the case with sherds with roughened (McKinney Plain), trailed-appliqued, and trailed-brushed decorative methods. Sherds with applied-fingernail punctated, applied-tool punctated, neck banded-incised (Nash Neck Banded), roughened-incised, and stamped (Cowhide Stamped) decorative methods are also present in these zones (see Table 3).

Sherds with the following utility ware decorative methods are most common in zones G-J: applied, applied-incised, brushed (along with Zone F), incised (along with Zones D and K), incised-punctated, neck banded, fingernail punctated, ridged (Belcher Ridged, *var. Belcher*), ridged-brushed (Belcher Ridged, *var. Byram's Ferry*, see Girard 2007), and roughened-appliqued (McKinney Plain, *nee* McKinney Appliqued). These same zones also have sherds with applied-fingernail punctated, applied-tool punctated, applied-punctated-incised,

brushed-appliqued, brushed-appliqued-incised, brushed-appliqued-punctated, neck banded-appliqued, neck banded-appliqued-incised, neck banded-brushed-appliqued, neck banded-incised, cane punctated, circular punctated, a sherd with both fingernail and tool punctations, ridged-incised, roughened-brushed, and trailed-punctated decorative elements (see Table 3).

Even though many of the same decorative methods are present in sherds across the zones, these proportional differences and presence/absence of specific decorative methods support the notion that the ceramic utility ware vessel sherds in and under the Hatchel platform mound can be segregated into four different groups based on zone stratigraphy and implied temporal differences:

Group I, Zones A-D

Group II, Zones E-F

Group III, Zones G-J and Above Zone K

Group IV, Zone K and Below Zone K

These same group stratigraphic differences, proportional changes in fine ware decorative methods, and presence/absence data in several decorative methods, are also recognized in the fine ware sherds (see below).

The shell-tempered utility wares are best represented in the sherds from appliqued (from McKinney Appliqued and Nash Neck Banded vessels), neck banded (Nash Neck Banded, shell variety), and punctated (fingernail and tool) vessels (see Table 3). Except for the tool punctated Emory Punctated-Incised vessel sherds most common in Zone A, the other shell-tempered utility wares are most common on zones atop the primary platform, namely zones G-H, and in the primary platform zones I-J (see Table 3).

Fine Wares

A total of 2718 fine ware sherds have been recovered in the platform mound excavations at the Hatchel site. Again, there are a variety of decorative methods represented in the sherds, along with sherds from vessels made with different tempers. The fine wares are dominated by sherds from vessels with engraved decorative methods, as they account for 66.3 percent of the fine ware assemblage, followed by red-slipped vessel sherds (13.3 percent), and engraved-punctated sherds (12.1 percent) from Barkman Engraved, Belcher Engraved, and Simms Engraved vessels (Table 4).

By zone among the fine wares, sherds from engraved vessels, engraved-appliqued vessel sherds (Hatchel Engraved), and the single engraved-brushed sherd are best represented in zones G, H, and Below H near the base of the second primary platform mound. Engraved-incised sherds from Hudson Engraved vessels are most common in zones A and B at the top of the second platform mound (see Table 4). Sherds with engraved-punctated decorative methods are most abundant in Zones E, G, and I, while the engraved-punctated-appliqued sherds from Belcher Engraved vessels occur only in zones G and H. The sherds from engraved-red-slipped vessels are most common in zones E-F, while the engraved-trailed sherds are present only in Zone B (a duck head effigy sherd, see below) and Zone Below H.

The most distinctive fine ware sherd in the Hatchel site mound ceramic assemblage is a red and white painted body sherd (i.e., white paint applied over red as well as red applied next to white), likely from an eastern Arkansas (Arkansas River basin) or northeastern Arkansas polychrome vessel

Table 4. Fine ware sherds from the Hatchel platform mound by temper, sherd type, decorative method, and zone.

Decorative Method	Grog		Grog-bone		Bone		Shell	
	rim	body	rim	body	rim	body	rim	body
<i>Engraved</i>								
Zone A	16	45	-	1	-	2	-	1
Zone B	18	39	-	1	-	1	-	1
Zone C	3	6	-	-	-	-	-	1
Zone D	8	17	-	-	-	-	-	-
Zone E	12	30	4	-	-	-	-	-
Zone F	19	61	1	2	-	1	-	-
Zone G	70	160	2	7	-	-	-	3
Zone H	174	528	9	19	3	6	2	2
Zone Below H	62	134	3	5	-	1	-	2
Zone Above I	13	12	-	-	-	-	-	-
Zone I	3	6	-	-	-	-	-	-
Zone J	2	4	-	-	-	-	-	-
Zone Above K	1	2	-	-	-	1	-	-
Zone K	3	2	-	-	-	-	-	-
SUBTOTAL	404	1046	19	35	3	12	2	10
<i>Engraved-appliqued</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	-	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	-
Zone G	-	1	-	-	-	-	-	-
Zone H	-	9	-	-	-	-	-	-
Zone Below H	-	2	-	1	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	-	12	-	1	-	-	-	-
<i>Engraved-brushed</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	-	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	-

Table 4. Fine ware sherds from the Hatchel platform mound by temper, sherd type, decorative method, and zone, cont.

Decorative Method	Grog		Grog-bone		Bone		Shell	
	rim	body	rim	body	rim	body	rim	body
Zone G	-	-	-	-	-	-	-	-
Zone H	-	-	-	-	-	-	-	-
Zone Below H	-	1	-	-	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	-	1	-	-	-	-	-	-
<i>Engraved-incised</i>								
Zone A	-	1	-	-	-	-	-	-
Zone B	1	1	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	-
Zone G	-	-	-	-	-	-	-	-
Zone H	-	1	-	-	-	-	-	-
Zone Below H	-	-	-	-	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	1	3	-	-	-	-	-	-
<i>Engraved-punctated</i>								
Zone A	3	1	-	-	-	-	-	-
Zone B	7	4	-	-	-	-	-	-
Zone C	3	-	-	-	-	-	-	-
Zone D	5	2	-	-	-	-	-	-
Zone E	9	9	-	-	-	-	-	-
Zone F	16	17	1	-	-	-	-	-
Zone G	24	32	2	2	-	-	-	-
Zone H	28	83	1	4	-	-	-	-
Zone Below H	4	10	-	-	-	-	-	-
Zone Above I	4	2	1	-	-	-	-	-
Zone I	1	3	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	1	-	-	-	-	-	-

Table 4. Fine ware sherds from the Hatchel platform mound by temper, sherd type, decorative method, and zone, cont.

Decorative Method	Grog		Grog-bone		Bone		Shell	
	rim	body	rim	body	rim	body	rim	body
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	104	164	5	6	-	-	-	-
<i>Engraved-punctated-appliqued</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	-	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	-
Zone G	-	3	-	-	-	-	-	-
Zone H	1	-	-	-	-	-	-	-
Zone Below H	-	-	-	-	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	1	3	-	-	-	-	-	-
<i>Engraved-red-slipped</i>								
Zone A	-	2	-	-	-	-	-	1
Zone B	-	2	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	2
Zone D	-	-	-	-	-	1	-	-
Zone E	2	1	-	-	-	1	1	1
Zone F	1	10	-	-	-	2	1	3
Zone G	3	5	-	3	-	4	-	4
Zone H	9	13	-	1	2	1	5	18
Zone Below H	1	4	-	-	-	-	1	1
Zone Above I	1	1	-	1	-	-	-	2
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	17	38	-	5	2	9	8	32
<i>Engraved-trailed</i>								
Zone A	-	-	-	-	-	-	-	-

Table 4. Fine ware sherds from the Hatchel platform mound by temper, sherd type, decorative method, and zone, cont.

Decorative Method	Grog		Grog-bone		Bone		Shell	
	rim	body	rim	body	rim	body	rim	body
Zone B	-	1	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	-
Zone G	-	-	-	-	-	-	-	-
Zone H	-	-	-	-	-	-	-	-
Zone Below H	1	-	-	-	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	1	1	-	-	-	-	-	-
<i>Painted</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	-	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	-
Zone G	-	-	-	-	-	-	-	-
Zone H	-	1**	-	-	-	-	-	-
Zone Below H	-	-	-	-	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	-	1	-	-	-	-	-	-
<i>Red-slipped</i>								
Zone A	2	6	-	-	-	1	-	4
Zone B	-	14	-	-	-	-	-	8
Zone C	-	6	1	1	-	-	-	6
Zone D	-	5	-	-	-	1	1	3
Zone E	-	8	-	-	-	1	-	1
Zone F	1	16	-	1	-	4	2	9
Zone G	2	41	-	8	-	2	-	8
Zone H	3	61	-	12	-	8	5	18

Table 4. Fine ware sherds from the Hatchel platform mound by temper, sherd type, decorative method, and zone, cont.

Decorative Method	Grog		Grog-bone		Bone		Shell	
	rim	body	rim	body	rim	body	rim	body
Zone Below H	1	18	1	1	-	-	-	4
Zone Above I	-	9	-	-	-	-	-	1
Zone I	-	1	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	9	185	2	23	-	17	8	62
<i>Red-slipped-appliqued</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	-	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	-
Zone G	-	-	-	-	-	-	-	-
Zone H	-	-	-	1	-	-	-	-
Zone Below H	-	-	-	-	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	-	-	-	1	-	-	-	-
<i>Trailed</i>								
Zone A	-	8	-	1	-	-	-	-
Zone B	-	10	-	-	-	-	-	-
Zone C	-	6	-	-	-	-	-	1
Zone D	-	2	-	2	-	-	-	2
Zone E	-	3	-	-	-	-	-	-
Zone F	-	-	-	1	-	-	-	-
Zone G	-	8	-	1	-	-	-	-
Zone H	-	3	-	-	-	2	-	-
Zone Below H	-	1	-	-	-	-	-	-
Zone Above I	-	1	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	1	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	-	43	-	5	-	2	-	3

Table 4. Fine ware sherds from the Hatchel platform mound by temper, sherd type, decorative method, and zone, cont.

Decorative Method	Grog		Grog-bone		Bone		Shell	
	rim	body	rim	body	rim	body	rim	body
<i>Trailed-Punctated</i>								
Zone A	-	-	-	-	-	-	-	-
Zone B	-	1	-	-	-	-	-	-
Zone C	-	-	-	-	-	-	-	-
Zone D	-	-	-	-	-	-	-	-
Zone E	-	-	-	-	-	-	-	-
Zone F	-	-	-	-	-	-	-	-
Zone G	-	-	-	-	-	-	-	-
Zone H	-	-	-	-	-	-	-	1
Zone Below H	-	-	-	-	-	-	-	-
Zone Above I	-	-	-	-	-	-	-	-
Zone I	-	-	-	-	-	-	-	-
Zone J	-	-	-	-	-	-	-	-
Zone Above K	-	-	-	-	-	-	-	-
Zone K	-	-	-	-	-	-	-	-
SUBTOTAL	-	1	-	-	-	-	-	1
Totals	537	1498	26	76	5	40	18	108

**not tempered

made ca. 500 years ago by late Mississippian peoples (see O'Brien 1994:368), and then traded/exchanged with the Nasoni Caddo living in the Hatchel mound community. Although the sherd cannot be typed, it may be from a Nodena Red and White or Avenue Polychrome vessel (George Sabo, October 2017 personal communication)), and both types date to this temporal period (see Phillips 1970). This sherd is from Zone H, the initial zone with specialized buildings constructed atop the primary platform mound, and forming the base of the second platform (see Figure 3).

Red-slipped rim and body sherds, including sherds from grog-tempered Simms Slipped vessels, are best represented in Zones B and C, while Keno Trailed vessel sherds are most abundant in Zones C and D (see Table 4). A red-slipped applied sherd from a Hatchel Engraved vessel is in Zone H, while two Keno Trailed sherds with punctated zones were recovered in Zones B and H.

The shell-tempered fine ware sherds are particularly common in the engraved-red-slipped and red-slipped decorative method groups (see Table 4). The engraved-red-slipped sherds account for 36.0 percent of this class of ceramics, and these are likely from McCurtain phase Avery Engraved vessels; McCurtain phase ceramics from the mid-Red River basin, upstream from the Hatchel site, are almost uniformly made with shell temper. Almost 23 percent of the red-slipped rim and body sherds in the mound assemblage are shell-tempered; these sherds are from Clement Redware, also a McCurtain phase red-slipped fine ware (see Flynn 1976).

Plain/Decorated Sherd Ratios

The plain to decorated sherd ratio (P/DR) has been a useful measure in characterizing ancestral Caddo ceramic sherd assemblages, particularly in identifying temporal and spatial trends in the proportion of decorated sherds from Caddo sites in East Texas. In many parts of East Texas, the temporal trend is for the P/DR values to decrease, such that P/DR values of 0.50 or less have been documented in post-A.D. 1400 to Historic Caddo assemblages, and values above 2.00-3.00 on pre-A.D. 1400 sites. In general, ceramic assemblages with low P/DR values tend to have high proportions of brushed utility wares: in the upper Neches River basin, for example, proportions of brushed sherds in the decorated sherds in assemblages range from 67.8-88.1 percent on ancestral Caddo sites that date from ca. A.D. 1560 to post-A.D. 1680 (Perttula and Walters 2016:215). This P/DR trend is not apparent in the ceramic assemblages recovered from the platform mound zones at the Hatchel site.

By zone groups, the P/DR values range from the bottom to the top of the mound zones at the Hatchel site:

- 2.75 in Zone K,
- 1.82 in Zones I-Above K,
- 1.82 in Zones G-Above I,
- 1.89 in Zones E-F, and
- 2.14 in Zones A-D

If anything, and not including the Zone K assemblage since it has a very small sample size (n=60 sherds), the P/DR trends through the mound zones are for higher P/DR values from the primary platform mound zones (Zones I-Above K) and the initial zones with structures on the second mound platform through the later (Zones E-F) and latest (Zones A-D) mound structural zones. The P/DR values in the mound zones ranges from only 1.82 to 2.14, indicating no significant differences in the proportions of plain to decorated sherds throughout the mound's construction and use, presumably because of no significant differences in the community's practice of decorating utility ware and fine ware vessels.

These P/DR values are primarily consistent with a limited use of brushed decorative elements to cover the rim and body of utility ware vessels; instead, much of the utility ware vessels have plain bodies and decorated rims, raising the proportion of plain to decorated sherds accordingly. Only about 15 percent of the decorated sherds in the Hatchel mound assemblage have brushed decorative elements (see Table 3).

Zone A Decorated Sherd Elements

Now I turn to the discussion of the decorated sherd elements represented in the different zones in and under the Hatchel platform mound. The discussion will proceed from zone to zone, by rim and body sherds, and by temper classes.

The ceramic sherds in Zone A are associated with several features, features that likely were standing when Teran explored the site and the surrounding Nasoni Caddo community in 1691. There is one clear circular structure on this top mound structure zone, Feature 1 (Figure 56); the majority of sherds from features in Zone A are from this structure. It is situated on the east side of the mound,

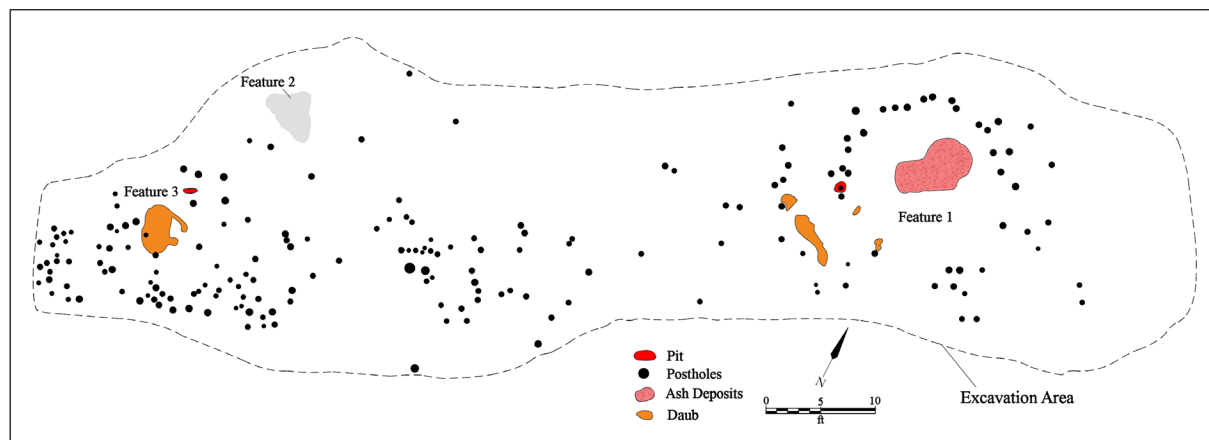


Figure 56. Plan map of Zone A structures and other features.

as Teran's map indicated, and it has a poorly defined wood post extended entranceway that faces to the southeast.

A second area of structures is represented by the mass of post holes and one area of daub associated with Feature 3 at the western end of the platform mound. A large pit feature (1.5 x 1.2 m) (Feature 2) is located several m north of the Feature 3 post holes. There is a third smaller cluster of post holes between Features 1 and 3 that may represent a *ramada* or elevated platform. One group of post holes form a roughly rectangular area about 3 x 3 m in size (see Figure 56).

Tables 5-8 list the decorative methods and decorative elements in the Zone A utility ware and fine ware sherds by temper and sherd type. The most common utility ware in Zone A are sherds from Foster Trailed-Incised vessels (Table 5 and Figure 57b), likely from *var. Foster* (see Schambach and Miller 1984:Figure 11-10). One unique Foster Trailed-Incised, *var. unspecified* body sherd has opposed curvilinear trailed lines on either side of a straight applied fillet. Other utility wares in this zone are represented by sherds from Belcher Ridged, *var. Belcher*, McKinney Plain, McKinney Applied, and Nash Neck Banded jars, along with sherds from brushed, brushed-appliqued, brushed-incised, and brushed-punctated vessels; most of these sherds may be from Karnack Brushed-Incised vessels. Other utility ware sherds in Zone A have applied elements on the vessel

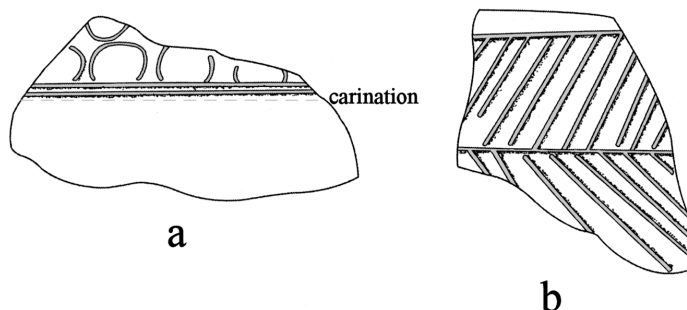


Figure 57. Selected decorative elements on utility ware sherds in Zone A:
a, Crockett Curvilinear Incised; b, Foster Trailed-Incised, *var. unspecified*.

Table 5. Grog-tempered decorated sherds and decorated elements in Zone A of the Hatchel platform mound.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Appliqued</i>			
circular appliqued node	-	1	1
curvilinear appliqued ridge	-	1	1
straight appliqued fillet	-	3	3
straight appliqued ridge	-	6	6
<i>Brushed</i>			
horizontal brushed marks	1	1	2
opposed brushed marks	-	2	2
parallel brushed marks	-	10	10
vertical brushed marks	1	2	3
<i>Brushed-Appliqued</i>			
parallel brushed-straight appliqued ridge	-	2	2
<i>Brushed-Incised</i>			
parallel brushed-incised marks and diagonal incised lines	-	11	11
parallel brushed and overlying diagonal incised lines	-	1	1
parallel brushed-incised and overlying diagonal incised lines	-	1	1
<i>Brushed-Punctated</i>			
parallel brushed-tool punctated row through the brushing	-	1	1
<i>Incised</i>			
1+ set of short diagonal incised lines (Foster Trailed-Incised)	-	3	3
2+ sets of short diagonal incised lines (Foster Trailed-Incised)	-	2	2
3+ sets of short diagonal incised lines (Foster Trailed-Incised)	-	1	1
short diagonal incised lines (Foster Trailed-Incised)	-	3	3
horizontal incised zones with opposed incised lines (Foster Trailed-Incised)	1	-	1
diagonal opposed incised lines	-	1	1
8+ horizontal incised lines	1	-	1
opposed incised lines	-	1	1
parallel incised lines	-	11*	11
parallel and opposed incised lines	-	1	1
straight incised line	-	1	1

Table 5. Grog-tempered decorated sherds and decorated elements in Zone A of the Hatchel platform mound. cont.

Decorative method and element	Rim	Body	N
<i>Incised-Punctated</i>			
horizontal incised lines and zone of cane punctations (cf. Crockett Curvilinear Incised)	-	1	1
parallel incised lines between tool punctated rows	-	1	1
<i>Neck Banded (Nash Neck Banded)</i>			
horizontal neck bands	3	7	10
<i>Punctated</i>			
tool punctated row/rows	2	5	7
<i>Ridged (Belcher Ridged, var. Belcher)</i>			
parallel ridged el.	-	1	1
<i>Roughened (McKinney Plain)</i>			
roughened surface	3	-	3
<i>Roughened-Appliqued (McKinney Appliqued)</i>			
roughened surface and appliqued node	1	-	1
<i>Trailed (Foster Trailed-Incised)</i>			
multiple curvilinear trailed lines	-	14	14
single curvilinear trailed line	-	1	1
4+ horizontal trailed lines	-	1	1
parallel trailed lines	-	3	3
straight trailed line	-	1	1
<i>Trailed-Appliqued (Foster Trailed-Incised)</i>			
opposed curvilinear trailed lines on either side of a straight appliqued fillet	-	1	1
Fine Ware			
<i>Engraved</i>			
bracket-shaped cross-hatched zone and slanting scroll lines (Hodges Engraved)	-	1	1
cross-hatched engraved zone	-	1	1
cross-hatched engraved zone and curvilinear engraved line with tick marks (Hodges Engraved)	-	1	1

Table 5. Grog-tempered decorated sherds and decorated elements in Zone A of the Hatchel platform mound. cont.

Decorative method and element	Rim	Body	N
curvilinear engraved lines, multiple (Taylor Engraved)	-	1	1
curvilinear engraved lines and hatched negative oval (Hodges Engraved)	-	1	1
curvilinear engraved zone with cross-hatched lines (Hodges Engraved)	-	2	2
diagonal engraved lines	-	1	1
diagonal engraved line and tick marks	-	1	1
diagonal hatched zone/zones	-	2	2
1+ horizontal engraved line	4	6	10
2+ horizontal engraved lines	2	3	5
3+ horizontal engraved lines (Simms Engraved)	3	-	3
horizontal-diagonal engraved lines	1	-	1
horizontal and discontinuous horizontal engraved lines	-	1	1
horizontal and vertical engraved lines	-	1	1
horizontal-vertical engraved lines and horizontal hatched zone	1	-	1
horizontal engraved lines and vertical curvilinear hatched zones	-	1	1
horizontal engraved lines-engraved bracket el. (Simms Engraved)	1	-	1
horizontal engraved lines-excised bracket el. (Simms Engraved)	-	1	1
horizontal engraved lines and hatched zone	-	1	1
horizontal engraved lines and hatched rectangular zone	1	-	1
horizontal engraved lines-set of vertical engraved lines (Simms Engraved)	1	-	1
horizontal engraved line and excised tick marks (Simms Engraved)	1	1	2
horizontal engraved lines-horizontal scroll line with tick marks (Simms Engraved)	1	-	1
opposed engraved lines	-	1	1
opposed hatched curvilinear zone	-	1	1
parallel engraved lines	-	4	4
widely-spaced parallel engraved lines	-	3	3
straight engraved line	-	8	8
parallel engraved lines and narrow cross-hatched zone	-	1	1

Table 5. Grog-tempered decorated sherds and decorated elements in Zone A of the Hatchel platform mound. cont.

Decorative method and element	Rim	Body	N
<i>Engraved-Incised (Hudson Engraved)</i>			
curvilinear and circular engraved zones filled with hatched incised lines	-	1	1
<i>Engraved-Punctated</i>			
horizontal engraved line and excised punctated rows (Simms Engraved)	1	1	2
horizontal-vertical engraved lines and upper and lower rows of excised punctations (Belcher Engraved)	1	-	1
horizontal engraved lines and excised punctated row between, with slanted scroll line and set of vertical engraved lines; excised punctated row at carination (Belcher Engraved)	1	-	1
<i>Engraved-Red-Slipped</i>			
2+ curvilinear engraved lines-int./ext. red-slipped	-	1	1
straight engraved line and int./ext. red-slipped	-	1	1
<i>Red-Slipped</i>			
ext. red-slipped	1	1	2
int./ext. red-slipped	-	5	5
<i>Trailed (Keno Trailed)</i>			
multiple curvilinear trailed lines	-	7	7
opposed multiple curvilinear trailed lines	-	1	1
Totals	33	164	197

*one sherd has grog and hematite temper

body, including nodes, ridges, and fillets, of McKinney Appliqued, Nash Neck Banded, and Emory Punctated-Incised vessels, as well as sherds with simple geometric incised elements or tool punctated rows (Table 5).

One grog-tempered sherd is from a Crockett Curvilinear Incised carinated bowl. It has horizontal incised lines above the vessel carination and a zone of large cane punctations (see Figure 57a). This sherd likely came in the mound fill collected from the pre-A.D. 1300 non-mound village deposits in Village Area II.

The fine wares in Zone A include those with engraved, engraved-incised, engraved-excised punctated, engraved-red-slipped, red-slipped, and trailed decorative elements (see Table 5). These are from Belcher Engraved, *var. Owens* (n=2), Hodges Engraved (n=5, Figure 58c, e), Hudson Engraved (Figure 58d), Keno Trailed (n=8), Simms Engraved (n=11, Figure 58a-b), and Taylor Engraved (n=1). Five of the engraved sherds have distinctive excised tick marks, and 2 percent have excised punctations. Sherds from red-slipped vessels comprise about 4 percent of the Zone A decorated sherds, and two other sherds have engraved lines on a red-slipped background.

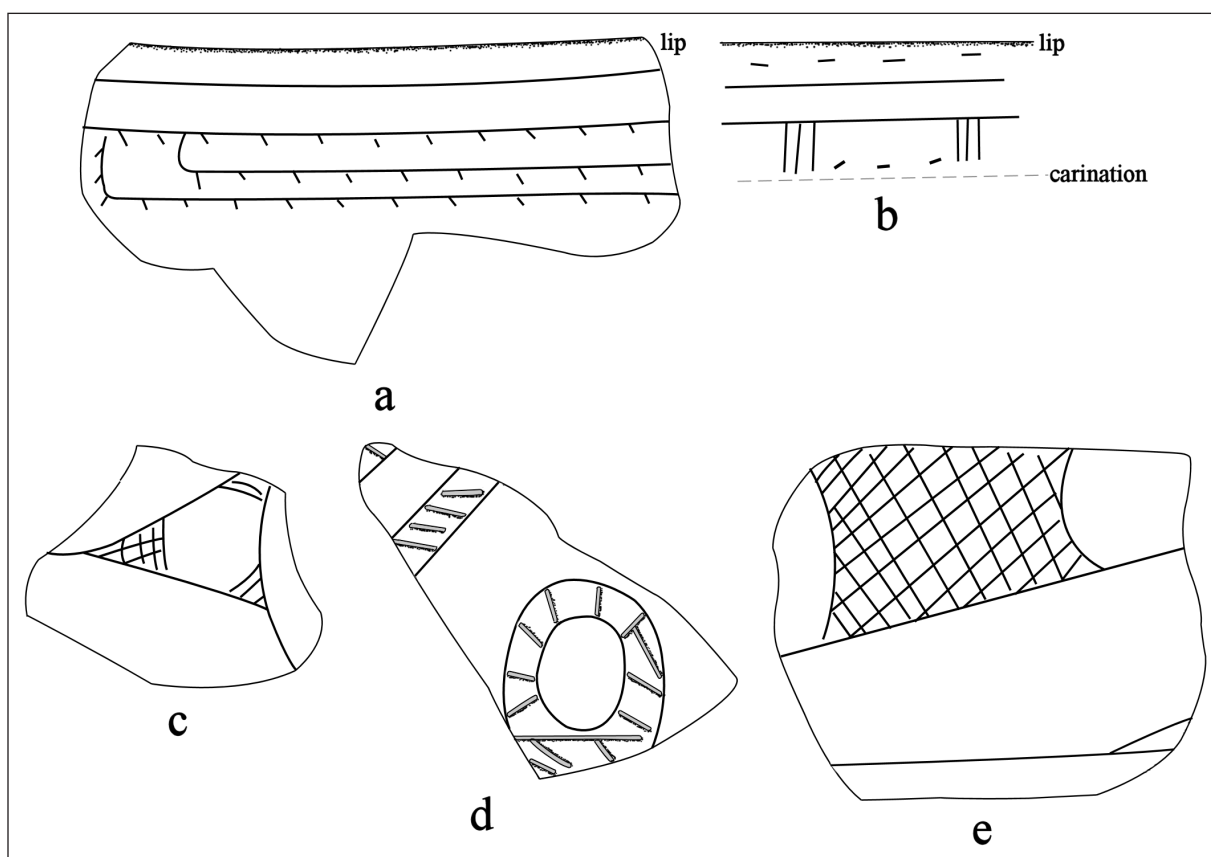


Figure 58. Selected decorative elements on grog-tempered fine ware sherds from Zone A: a-b, Simms Engraved; c, e, Hodges Engraved; d, Hudson Engraved.

The grog-bone-tempered decorated utility ware sherds in Zone A are from Foster Trailed-Incised, *var. unspecified* and Nash Neck Banded vessels, as well as vessels with rows of tool punctations, vessels with incised elements, and one body sherd with parallel applied ridges (possibly from a Cass Appliqued jar) (Table 6). The grog-bone-tempered fine ware sherds are from a Taylor Engraved bottle, a cf. Wilder Engraved, *var. unspecified* bottle that may have been made by a Titus phase potter, and a Keno Trailed, *var. unspecified* bottle sherd.

Bone-tempered decorated vessels are not common in Zone A at the Hatchel mound site, including two brushed and incised sherds, and three fine ware sherds (Table 7). The body sherd with multiple curvilinear engraved lines may be from a Taylor Engraved bottle. The red-slipped sherd is from a bowl or carinated bowl.

Table 6. Grog-bone-tempered decorated sherds and decorated elements in Zone A.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Appliqued</i>			
parallel appliqued ridges	-	1	1
<i>Incised</i>			
chevron incised element	-	1	1
parallel incised lines	-	2	2
<i>Neck Banded (Nash Neck Banded)</i>			
horizontal neck bands	1	-	1
<i>Punctated</i>			
diagonal tool punctated row	-	1	1
tool punctated row	1	-	1
<i>Trailed (Foster Trailed-Incised)</i>			
multiple curvilinear trailed lines	-	1	1
opposed trailed lines	-	1	1
Fine Ware			
<i>Engraved</i>			
curvilinear engraved lines, multiple (cf. Taylor Engraved)	-	1	1
curvilinear engraved lines and widened hatched and excised zones (cf. Wilder Engraved)	-	1	1
<i>Trailed (Keno Trailed)</i>			
opposed sets of curvilinear trailed lines	-	1	1
Totals	2	10	12

Shell-tempered decorated sherds are fairly common in Zone A of the platform mound excavations (Table 8). They include appliqued sherds from either Emory Punctated-Incised, McKinney Appliqued, or Nash Neck Banded vessels, likely made upriver in McCurtain phase communities, and brushed and trailed sherds from Karnack Brushed-Incised and Foster Trailed-Incised, *var. unspecified* vessels made downstream in the Great Bend area by a Belcher phase community. Also present in the shell-tempered utility wares are incised, incised, and punctated rim and body sherds that may be from Emory Punctated-Incised vessels.

Table 7. Bone-tempered decorated sherds and decorated elements in Zone A.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Brushed</i>			
parallel brushed	-	1	1
<i>Incised</i>			
diagonal incised line	1	-	1
Fine Ware			
<i>Engraved</i>			
curvilinear engraved lines, multiple	-	1	1
straight engraved line	-	1	1
<i>Red-Slipped</i>			
int./ext. red-slipped	-	1	1
Totals	1	4	5

The few shell-tempered fine ware sherds in Zone A include four red-slipped Clement Redware body sherds (or the undecorated portions of red-slipped Avery Engraved vessels), and two engraved body sherds (see Table 8). One of these sherds is from a red-slipped Avery Engraved vessel, and the other has a hatched triangle element, probably from a Hodges Engraved, *var. Armour* vessel (see Schambach and Miller 1984:Figure 11-13a).

Zone B Decorated Sherd Elements

Zone B lies approximately 30 cm below the features in Zone A, and contains an abundance of ceramic sherds. Arcs of post holes to at least three closely-spaced circular structures are apparent in the central and eastern part of Zone B on the platform mound (Figure 59). Feature 5, in the center of the zone, and with an estimated diameter of only 3.66 m, is in the size range consistent with features identified as granaries at other East Texas Caddo sites.

Feature 4 may be from a large (ca. 8 m in diameter) circular structure with an extended entrance-way facing south, or the arcs to two different and smaller circular structures (see Figure 59); this feature has the highest number of sherds from features in Zone B. There are two pit features, one a large storage pit (Beatty 1939:145), associated with Feature 6.

The grog-tempered decorated sherds in Zone B are divided between sherds from utility wares (n=132, 58 percent) and fine wares (n=95, 42 percent) (Table 9). Sherds from vessels with

Table 8. Shell-tempered decorated sherds and decorated elements in Zone A.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Appliqued</i>			
straight appliqued ridge	-	2	2
<i>Brushed (Karnack Brushed-Incised)</i>			
parallel brushed	-	1	1
<i>Incised</i>			
parallel incised lines	-	1	1
<i>Incised-Punctated</i>			
fingernail punctated row and horizontal incised line	1	-	1
5+ fingernail punctated rows-horizontal incised line at rim-body juncture (Emory Punctated-Incised)	1	-	1
straight incised line and adjacent circular punctated zone	-	1	1
<i>Punctated</i>			
tool punctated row/rows	-	4	4
<i>Trailed (Foster Trailed-Incised)</i>			
multiple curvilinear trailed lines	-	1	1
Fine Ware			
<i>Engraved</i>			
hatched engraved triangle el.	-	1	1
<i>Engraved-Red-Slipped</i>			
multiple curvilinear engraved lines and int./ext. red-slipped (Avery Engraved)	-	1	1
<i>Red-Slipped</i>			
ext. red-slipped	-	1	1
int./ext. red-slipped	-	3	3
Totals	2	16	18

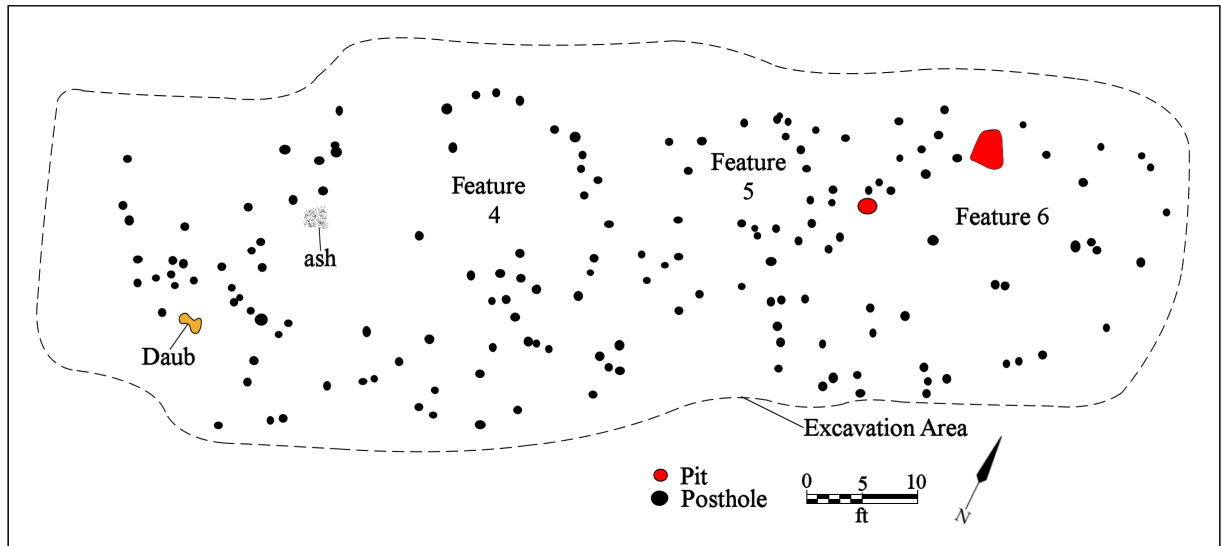


Figure 59. Plan map of Zone B structures and other features.

applied, applied-incised, and applied-punctated decorative elements account for 10 percent of the utility wares, and these are likely body sherds from McKinney Applied, Nash Neck Banded, or Emory Punctated-Incised vessels. Sherds from vessels with brushed marks, including Karnack Brushed-Incised and Pease Brushed-Incised, as well as brushed-applied, brushed-incised, brushed-incised-punctated (Figure 60f), and brushed-punctated decorative elements comprise about 30 percent of the utility wares.

Table 9. Grog-tempered decorated sherds and decorated elements in Zone B.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Applied</i>			
curvilinear applied node	-	1	1
closely-spaced parallel applied ridges (Cass Applied)	-	1	1
straight applied fillet	-	1	1
straight applied ridge	-	7	7
<i>Applied-Incised</i>			
straight incised line-adjacent straight applied ridge	-	1	1
<i>Applied-Punctated</i>			
straight applied ridge and adjacent linear tool punctated row	-	2	2
<i>Brushed</i>			
diagonal brushed marks	2	-	2

Table 9. Grog-tempered decorated sherds and decorated elements in Zone B, cont.

Decorative method and element	Rim	Body	N
horizontal-diagonal brushed marks	-	1	1
parallel brushed marks	-	19	19
vertical brushed marks	-	2	2
<i>Brushed-Appliqued</i>			
parallel brushed-straight appliqued ridge	-	1	1
<i>Brushed-Incised</i>			
parallel brushed-incised marks and lines	-	11	11
vertical brushed-incised marks and lines	-	1	1
<i>Brushed-Incised-Punctated</i>			
cross-hatched lines above row of tool punctations; horizontal-diagonal-overlapping brushing on body	-	1	1
vertical brushed-incised marks and lines and tool punctated row above	-	1	1
<i>Brushed-Punctated</i>			
parallel brushed-tool punctated row through the brushing	-	1	1
<i>Incised</i>			
curvilinear incised zone with diagonal hatched lines	-	1	1
1+ set of short diagonal incised lines (Foster Trailed- Incised)	-	1	1
2+ sets of short diagonal incised lines (Foster Trailed- Incised)	-	3	3
closely-spaced diagonal incised lines in narrow zone (Foster Trailed-Incised)	-	1	1
diagonal opposed incised lines	2	1	3
3+ horizontal incised lines	1	-	1
5+ horizontal incised lines	1	-	1
parallel incised lines	-	11	11
closely-spaced parallel incised lines	-	1	1
straight incised line	-	6	6
<i>Incised-Punctated</i>			
bracket-shaped incised el. with vertical punctations	-	1	1
diagonal opposed incised lines-tool punctated rows	-	1	1

Table 9. Grog-tempered decorated sherds and decorated elements in Zone B, cont.

Decorative method and element	Rim	Body	N
diagonal opposed incised lines divided by tool punctated rows (cf. Sanson Incised)	1	-	1
horizontal, curvilinear, and slanting incised scroll el., and zone of tool punctations	-	1	1
slanting incised scroll lines above tool punctated rows	-	1	1
<i>Neck Banded (Nash Neck Banded)</i>			
horizontal neck bands	2	7	9
<i>Punctated</i>			
fingernail punctated row	1	3	4
linear tool punctated row	-	1	1
tool punctated row/rows	-	4	4
<i>Ridged-Brushed (Belcher Ridged)</i>			
parallel ridged-parallel brushed	-	1	1
<i>Roughened (McKinney Plain)</i>			
roughened surface	4	1	5
<i>Trailed (Foster Trailed-Incised)</i>			
multiple curvilinear trailed lines	-	16	16
parallel trailed lines	-	2	2
straight trailed line	-	1	1
<i>Trailed-Incised (Foster Trailed Incised)</i>			
diagonal incised lines-curvilinear trailed lines	-	1	1
short diagonal incised lines divided by horizontal trailed lines; the top row of diagonal incised lines ends in small circular punctations	1	-	1
Fine Ware			
<i>Engraved</i>			
cross-hatched engraved zone	1	1	2
curvilinear engraved lines, multiple	-	3	3
curvilinear engraved lines, one with tick marks	-	1	1
curvilinear engraved lines, multiple, with tick marks (Hodges Engraved)	-	1	1
curvilinear engraved lines-curvilinear zone with hatched lines and negative oval el. (Hodges Engraved)	-	1	1

Table 9. Grog-tempered decorated sherds and decorated elements in Zone B, cont.

Decorative method and element	Rim	Body	N
curvilinear engraved lines-curvilinear zone with diagonal opposed lines-one curvilinear line with tick marks (Hodges Engraved)	-	1	1
curvilinear engraved lines and zones filled with hatched, cross-hatched lines, hooked arm el, and circle el. (Hodges Engraved)	-	1	1
diagonal engraved line	-	2	2
diagonal opposed engraved lines	-	1	1
fine horizontal engraved lines (Hickory Engraved)	-	1	1
1+ horizontal engraved line	2	3	5
2+ horizontal engraved lines	2	2	4
horizontal engraved line	-	1	1
horizontal engraved lines and hatched curvilinear zone (Simms Engraved)	-	1	1
horizontal engraved lines and narrow hatched horizontal zone	1	-	1
horizontal engraved panel with curvilinear lines and oval-shaped el. (Glassell Engraved)	1	-	1
horizontal-curvilinear engraved lines	1	1	2
horizontal-diagonal engraved lines	-	1	1
horizontal-vertical engraved lines	-	1	1
horizontal engraved lines-vertical excised column	-	1	1
horizontal engraved line and vertical hatched lines	-	1	1
opposed engraved lines	-	1	1
opposed curvilinear engraved lines	-	1	1
parallel engraved lines	-	3	3
straight engraved line	-	7	7
horizontal engraved line with tick marks	-	1	1
horizontal engraved lines with tick marks (Simms Engraved)	2	-	2
horizontal engraved lines-top line with tick marks	1	-	1
horizontal, curvilinear (one with tick marks), and vertical engraved lines, and curvilinear engraved zones with cross- hatched lines and negative ovals (Hodges Engraved)	1	-	1
horizontal and curvilinear engraved lines, the latter with tick marks	2	-	2
horizontal-vertical engraved lines-tick marks (Simms Engraved)	1	-	1
horizontal and vertical curvilinear engraved lines with tick marks (Simms Engraved)	1	-	1

Table 9. Grog-tempered decorated sherds and decorated elements in Zone B, cont.

Decorative method and element	Rim	Body	N
horizontal and curvilinear engraved lines (with tick marks) and vertical bracket dividers (Simms Engraved)	2	-	2
rectilinear engraved el., with horizontal lines with tick marks (Simms Engraved)	1	-	1
excised zone and diagonal tick marks	-	1	1
<i>Engraved-Incised</i>			
curvilinear engraved zones filled with short diagonal incised lines (Hudson Engraved)	-	1	1
horizontal engraved lines and vertical engraved column with hatched incised lines	1	-	1
<i>Engraved-Punctated</i>			
curvilinear engraved lines, one with tick marks, and vertical and horizontal excised punctations (Simms Engraved)	-	1	1
diagonal engraved lines and excised punctated row	-	1	1
horizontal engraved line above row of excised punctations (Belcher Engraved)	1	-	1
horizontal engraved line below row of excised punctations (Simms Engraved)	-	1	1
horizontal engraved lines with row of excised punctations between the lines-vertical engraved line divider (Simms Engraved)	1	-	1
horizontal engraved lines with row of excised punctations between the lines (Belcher Engraved)	2	-	2
horizontal engraved lines with tick marks, and row of excised punctations between the lines (Simms Engraved)	1	-	1
horizontal engraved lines, one with tick marks (Simms Engraved)	-	1	1
horizontal engraved line with tick marks below row of excised punctations	1	-	1
horizontal hatched vertical columns with vertical row of excised punctations between the columns	-	1	1
straight engraved line with tick marks and row of linear punctations (Simms Engraved)	-	1	1
<i>Engraved-Red-Slipped</i>			
hatched engraved zone-int./ext. red-slipped	-	1	1
1+ horizontal engraved line-ext. red-slipped	-	1	1

Table 9. Grog-tempered decorated sherds and decorated elements in Zone B, cont.

Decorative method and element	Rim	Body	N
straight engraved line-ext. red-slipped	-	1	1
<i>Engraved-Trailed</i>			
diagonal engraved lines and curvilinear trailed lines (duck effigy head)	1	-	1
<i>Red-Slipped</i>			
ext. red-slipped	-	1	1
int./ext. red-slipped	-	12	12
<i>Trailed (Keno Trailed)</i>			
horizontal-curvilinear trailed lines	-	1	1
opposed-multiple curvilinear trailed lines	-	2	2
parallel trailed lines and opposed set of curvilinear trailed lines	-	1	1
multiple curvilinear trailed lines	-	7	7
sets of multiple curvilinear trailed lines	-	1	1
<i>Trailed-Punctated (Keno Trailed)</i>			
multiple curvilinear trailed lines and zone of excised punctations	-	1	1
Totals	42	185	227

Most of the incised sherds in Zone B have simple geometric elements, including horizontal and diagonal opposed incised lines on the rim (Figure 60a). Body sherds have parallel and straight incised lines, except for one body sherd that has a curvilinear incised zone filled with diagonal hatched lines, possibly a Hudson Incised vessel (see Table 9). About four percent of the incised sherds are from Foster Trailed-Incised, *var. Foster* vessels with zones of short diagonal incised lines. Another 16 percent of the utility ware sherds have trailed or trailed-incised decorative elements from *var. Foster* and *var. Dobson* (Figure 61) vessels.

Almost four percent of the utility wares in Zone B have incised-punctated decorative elements (see Figure 60b-e), either with incised zones filled with punctations, or rows of tool punctations below incised lines. One sherd is from a Sanson Incised vessel (see Figure 60d). Sanson Incised is a Plaquemine culture ceramic type (see Brown 1998:14, 26), and according to Kelley (1997:54) “is most common in Plaquemine sites in the Catahoula Lake region of east central Louisiana.” Girard (2004:56-57) notes that this type is present in some quantity on lower Red River sites in northwestern Louisiana. At the McLelland site (16BO236), a ca. A.D. 1650-1710 site on the Red River in Northwestern Louisiana, a single Sanson Incised, *var. unspecified* vessel sherd was recovered in the excavations there.

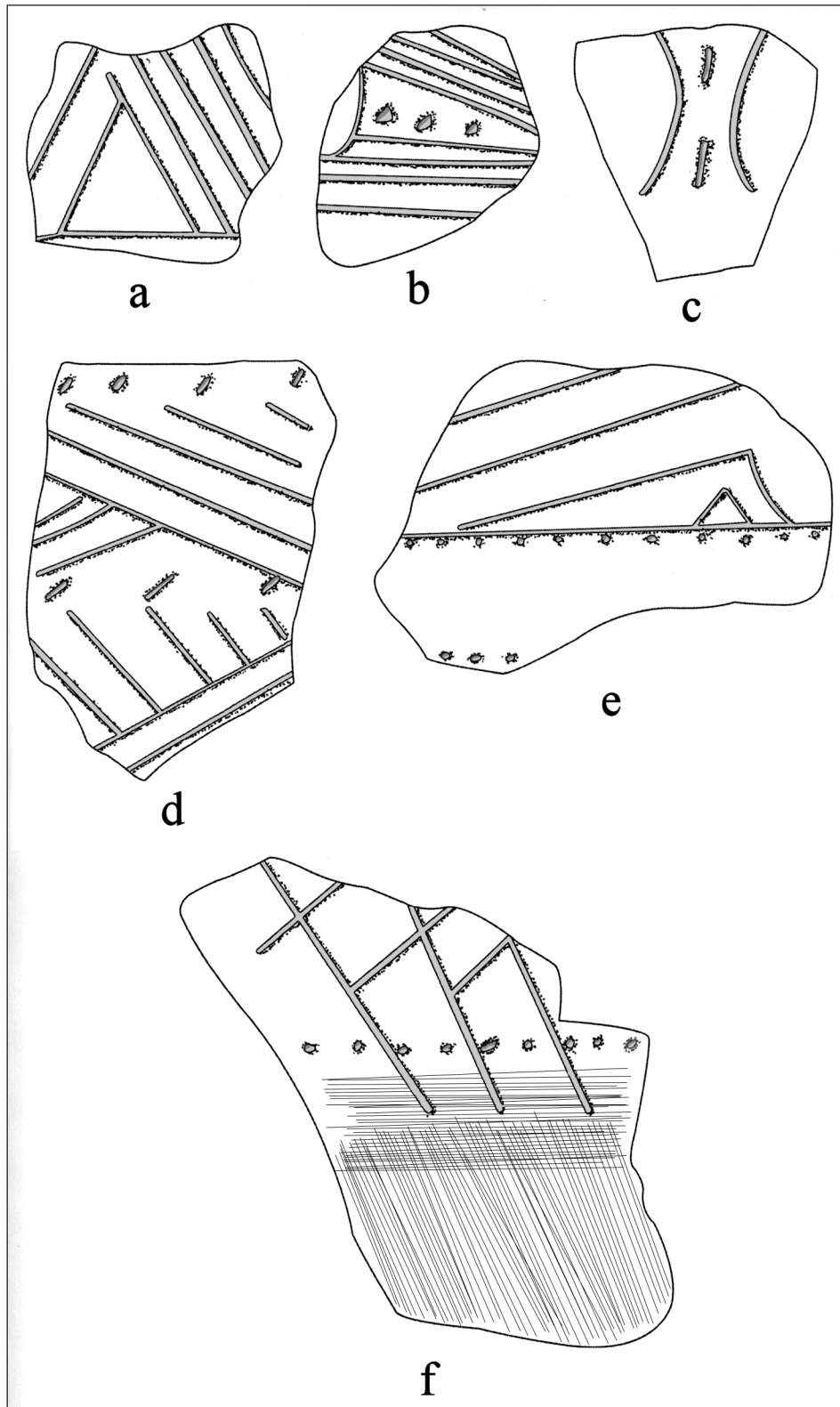


Figure 60. Selected utility ware sherds from Zone B at the Hatchel platform mound.

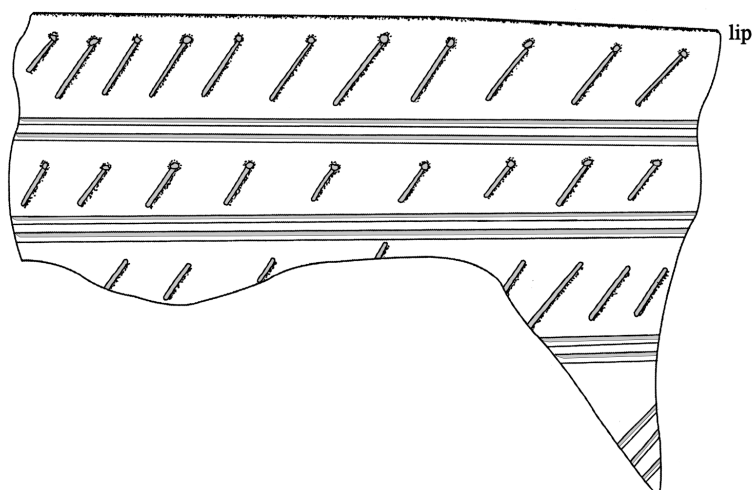


Figure 61. Foster Trailed-Incised, var. *Dobson* rim sherd in Zone B in the Hatchel platform mound.

The remainder of the Zone B utility wares include Nash Neck Banded rim and body sherds (6.8 percent of the utility ware sherds), Belcher Ridged (0.8 percent), and McKinney Plain (3.8 percent) (see Table 9).

Keno Trailed vessel sherds represent about 14 percent of the grog-tempered fine ware sherds in Zone B (see Table 9), including a Keno Trailed, var. *Glendora* vessel (Figure 62b), as well as a

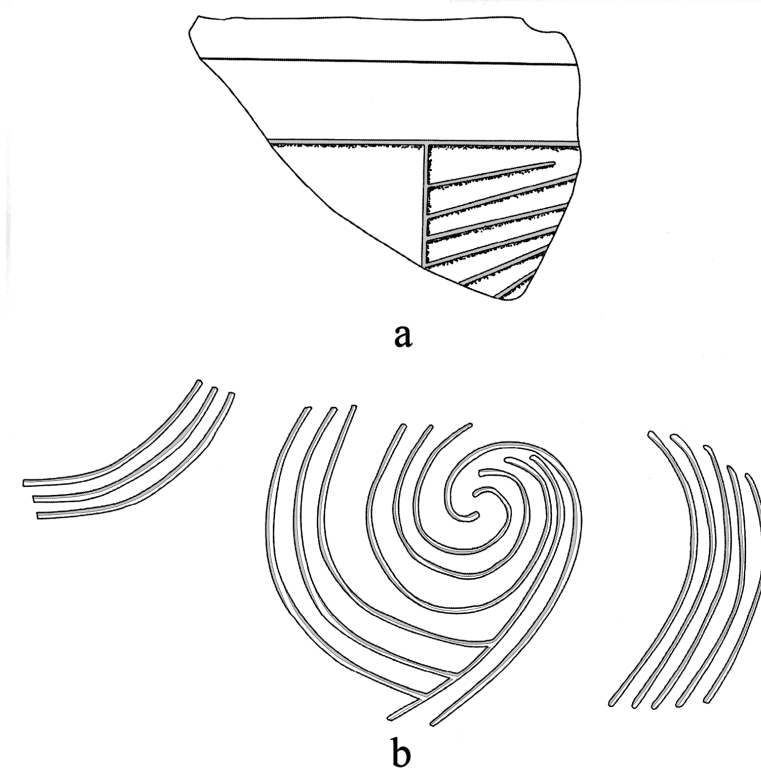


Figure 62. Selected decorative elements on engraved-incised and trailed sherds in Zone B of the Hatchel site platform mound.

Keno Trailed, *var. unspecified* body sherd with multiple curvilinear trailed lines and zones of excised punctations (see Table 9). There are also engraved-incised sherds in the assemblage (Figures 62a and 63h), including a Hudson Engraved vessel with engraved zones filled with hatched incised lines.

The engraved grog-tempered sherds in the Zone B assemblage are best represented by sherds from Simms Engraved carinated bowls (n=14, see Figure 63e, g), Hodges Engraved vessels (n=5,

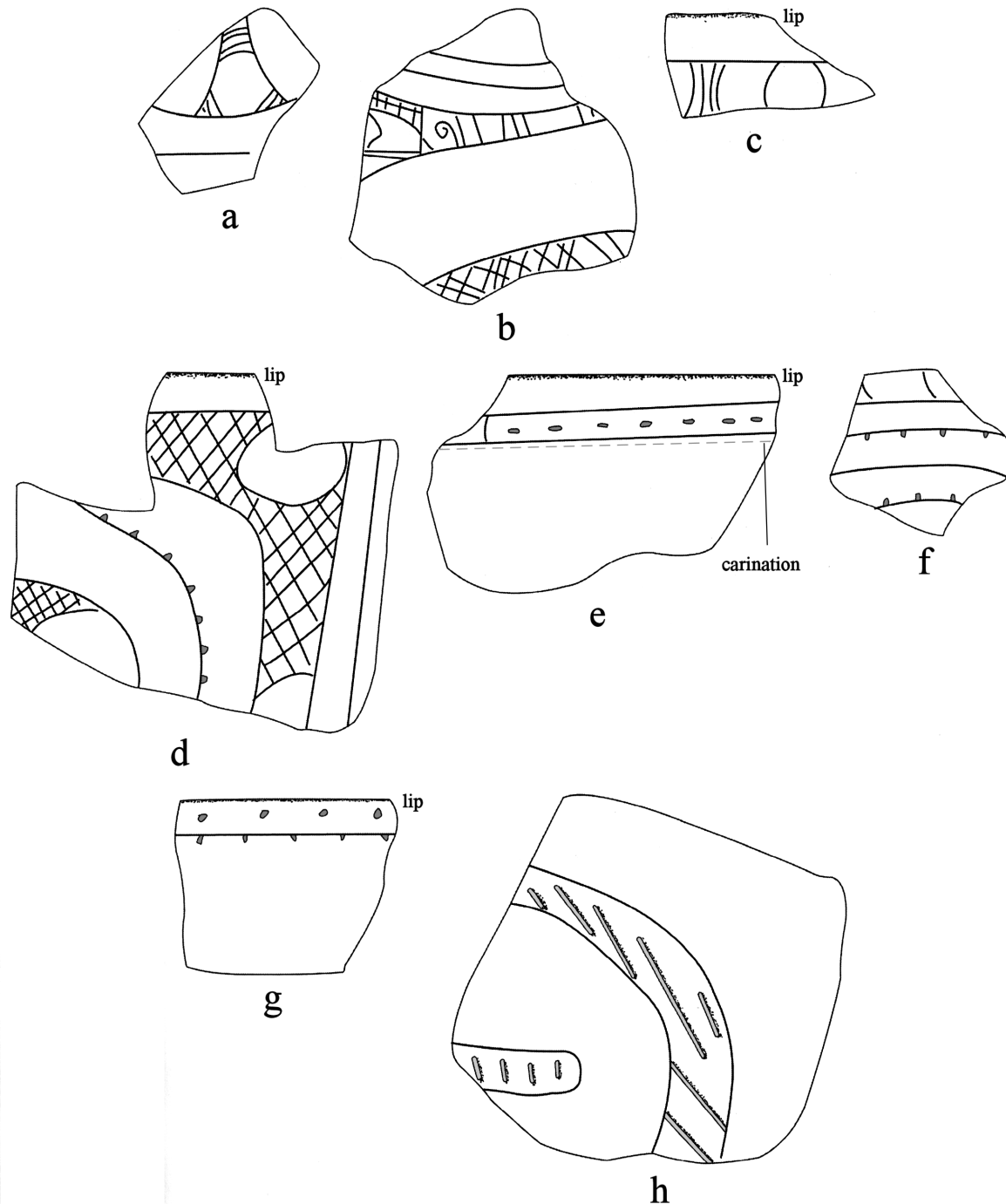


Figure 63. Selected decorative elements on engraved, engraved-punctated, and engraved-incised sherds in Zone B of the Hatchel site platform mound.

see Figure 63a-b, d, f), and Belcher Engraved vessels (n=3) with engraved and excised punctated elements (see Table 9). There are also sherds from Taylor Engraved (n=3) and Glassell Engraved (n=1, see Figure 63c) vessels, and a single Hickory Engraved body sherd with fine horizontal engraved lines (see Table 9); this sherd likely originated in village sediments used for Zone B mound construction and fill.

One engraved-trailed sherd in the grog-tempered decorated sherds is part of a duck head effigy from an effigy vessel recovered in Zone B (see Figure 116, below). About 3 percent of the fine wares have both engraved and red-slipped decorative elements, and another 14 percent of the fine ware sherds simply have at least one red-slipped surface, but are otherwise undecorated (see Table 9). Another distinctive aspect of the Zone B fine ware sherds is that almost 20 percent of the sherds are from vessels with excised tick marks, including both engraved and engraved-punctated vessels (see Table 9 and Figure 63d, f-g).

More than 91 percent of the grog-bone-tempered decorated sherds in Zone B are from utility wares, including sherds from vessels with applied ridge elements (likely from McKinney Applied or Nash Neck Banded vessels), brushed marks, brushed-incised marks and brushed-punctated elements, and body sherds from Foster Trailed-Incised, *var. unspecified* jars (Table 10). The one grog-bone-tempered fine ware is probably from a Taylor Engraved vessel with multiple curvilinear engraved lines.

The six body sherds from bone-tempered vessels in Zone B include utility wares (83 percent) and fine wares (17 percent) (Table 11). The utility ware sherds are from Foster Trailed-Incised,

Table 10. Grog-bone-tempered decorated sherds and decorated elements in Zone B.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Appliqued</i>			
straight appliqued ridge	-	1	1
<i>Brushed</i>			
parallel brushed marks	-	3	3
vertical brushed marks	-	1	1
<i>Brushed-Incised</i>			
parallel brushed-opposed incised lines overlying brushing	-	1	1
<i>Brushed-Punctated</i>			
vertical brushed-tool punctated row under lip	1	-	1
<i>Trailed (Foster Trailed-Incised)</i>			
multiple curvilinear trailed lines	-	3	3
straight trailed line	-	1	1

Table 10. Grog-bone-tempered decorated sherds and decorated elements in Zone B, cont.

Decorative method and element	Rim	Body	N
Fine Ware			
<i>Engraved</i>			
multiple curvilinear engraved lines	-	1	1
Totals	1	11	12

Table 11. Bone-tempered decorated sherds and decorated elements in Zone B.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Brushed</i>			
horizontal brushed marks	-	1	1
parallel brushed marks	-	1	1
<i>Incised</i>			
set of short diagonal incised lines (Foster Trailed-Incised)	-	1	1
<i>Incised-Punctated</i>			
horizontal incised line at rim-body juncture and diagonal tool punctated row above that	-	1	1
<i>Neck Banded (Nash Neck Banded)</i>			
parallel neck banded rows	-	1	1
Fine Ware			
<i>Engraved</i>			
multiple curvilinear engraved lines	-	1	1
Totals	-	6	6

var. Foster and Nash Neck Banded vessels, as well as vessels with brushed or incised-punctated decorative elements. The one fine ware body sherd may be from a Taylor Engraved vessel with multiple curvilinear engraved lines.

The one shell-tempered rim sherd in Zone B is from an Emory Punctated-Incised vessel with at least three rows of fingernail punctations (Table 12). Other utility wares include sherds from Karnack Brushed-Incised and Foster Trailed-Incised vessels, a body sherd with a straight applied fillet and another body sherd with rows of tool punctations. The shell-tempered fine ware sherds are dominated by body sherds with a red slip on both interior and exterior vessel surfaces. These are likely from Clement Redware (see Flynn 1976), a McCurtain phase fine ware type, or are from the slipped but otherwise undecorated portions of engraved vessels, probably Avery Engraved vessels.

Table 12. Shell-tempered decorated sherds and decorated elements in Zone B.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Appliqued</i>			
straight applied fillet	-	1	1
<i>Brushed (Karnack Brushed-Incised)</i>			
parallel brushed marks	-	1	1
<i>Incised</i>			
2+ sets of short diagonal incised lines (Foster Trailed-Incised)	-	1	1
parallel incised lines	-	1	1
<i>Punctated</i>			
3+ fingernail punctated rows (Emory Punctated-Incised)	1	-	1
tool punctated rows	-	1	1
Fine Ware			
<i>Engraved</i>			
horizontal engraved line-engraved bracket el.	-	1	1
<i>Red-Slipped</i>			
int./ext. red-slipped	-	8	8
Totals	1	14	15

Zone C Decorated Sherd Elements

The ceramic sherds in Zone C are associated with one clear structure: Feature 7, a circular structure with a central hearth, a hard-packed clay floor (Beatty 1939:164) and the fallen roof of a wattle and daub-covered extended entranceway (Figure 64). Zone C is approximately 30 cm below the top of Zone B (Beatty 1939:163). The extended entranceway to Feature 7 is about 2.5 m in length and is oriented to the southeast.

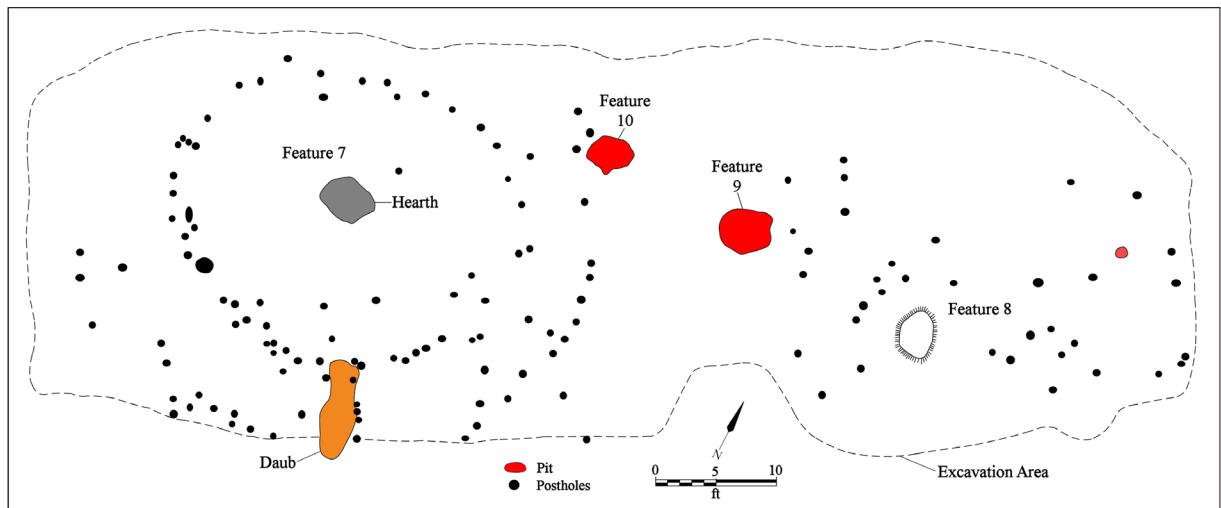


Figure 64. Plan map of Zone C structures and other features.

There are two storage pits filled with trash (Features 9 and 10), including ceramic sherds, between Feature 7 and Feature 8 (see Figure 64). Feature 9 had “hard packed clay sides and floor” (Beatty 1939:178). Feature 8 is marked by a number of post holes, but they do not form a clear post hole structure pattern; nevertheless, this had the highest number of sherds from the features in Zone C.

The grog-tempered decorated sherds in Zone C are rather evenly divided between utility wares (53 percent) and fine wares (47 percent (Table 13). The utility wares in Zone C are principally vessels with brushed marks (Karnack Brushed-Incised) and incised decorative elements.

The Zone C utility wares include body sherds with applied fillet or ridge elements from McKinney Applied, Nash Neck Banded, or other decorated jars, along with a Foster Trailed-Incised, *var. Foster* body sherd with an applied node encircled by curvilinear incised lines (see Table 13). Brushed, brushed-incised, and brushed-applied sherds comprise 22.6 percent of the utility wares, and sherds from incised vessels account for another 25.8 percent of the utility wares in Zone C. Three body sherds are from other Foster Trailed-Incised, *var. Foster* jars with sets of short diagonal incised lines on the vessel rim (see Schambach and Miler 1984:Figure 11-10). Three other Foster Trailed-Incised sherds have multiple curvilinear trailed lines, and one body sherd from a Foster Trailed-Incised, *var. Dobson* or *var. Red Lake* vessel has short diagonal incised lines on the rim that are divided by horizontal trailed lines. The remainder of the Zone C utility wares are from a Nash Neck Banded vessel, or are from vessels with tool punctated rows or incised-punctated elements with either fingernail or tool punctated rows or zones (see Table 13).

The Zone C grog-tempered fine ware sherds have engraved, engraved-punctated, red-slipped, and trailed decorative elements (see Table 13). The sherds with engraved designs are from Simms

Table 13. Grog-tempered decorated sherds and decorated elements in Zone C.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Appliqued</i>			
straight appliqued fillet	-	1	1
straight appliqued ridge	-	1	1
<i>Appliqued-Incised</i>			
appliqued node encircled by curvilinear incised lines (Foster Trailed-Incised)	-	1	1
<i>Brushed</i>			
diagonal brushed marks	1	-	1
parallel brushed	-	4	4
<i>Brushed-Appliqued</i>			
parallel brushed-straight appliqued ridge	-	1	1
<i>Brushed-Incised</i>			
diagonal brushed-incised marks and lines	-	1	1
<i>Incised</i>			
curvilinear incised line	-	1	1
horizontal-vertical incised lines	1	-	1
parallel incised lines	-	6	6
1+ set of short diagonal incised lines (Foster Trailed-Incised)	-	2	2
2+ sets of diagonal incised lines (Foster Trailed-Incised)	-	1	1
<i>Incised-Punctated</i>			
diagonal incised lines-tool punctated-filled zone	-	1	1
diagonal opposed incised lines-fingernail punctated row below the lip	1	-	1
straight incised line-adjacent fingernail punctated row	-	1	1
<i>Neck Banded (Nash Neck Banded)</i>			
horizontal neck bands	-	1	1
<i>Punctated</i>			
tool punctated rows	-	2	2
<i>Trailed (Foster Trailed-Incised)</i>			
multiple curvilinear trailed lines	-	3	3

Table 13. Grog-tempered decorated sherds and decorated elements in Zone C, cont.

Decorative method and element	Rim	Body	N
<i>Trailed-Incised (Foster Trailed-Incised)</i>			
1+ set of short diagonal incised lines and horizontal trailed line	-	1	1
Fine Ware			
<i>Engraved</i>			
curvilinear engraved lines with tick marks-curvilinear cross-hatched zones with negative ovals (Hodges Engraved)	-	1	1
hatched triangle el.	-	1	1
2+ horizontal engraved lines	1	-	1
3+ closely-spaced horizontal engraved lines	1	-	1
1+ horizontal engraved line-hatched pendant triangle el.	-	1	1
horizontal engraved line/lines with tick marks	1	1	2
horizontal-curvilinear engraved lines with tick marks (Simms Engraved)	-	1	1
parallel engraved lines	-	1	1
slanted scroll lines and excised scroll fill zone	-	1	1
<i>Engraved-Punctated</i>			
curvilinear engraved lines with elongated excised punctations between lines (Belcher Engraved)	-	1	1
horizontal engraved line below row of excised punctations (Belcher Engraved)	2	-	2
horizontal-curvilinear engraved lines and excised punctated row (Simms Engraved)	1	-	1
<i>Red-Slipped</i>			
int./ext. red-slipped	-	6	6
<i>Trailed (Keno Trailed)</i>			
curvilinear opposed trailed lines	-	1	1
multiple opposed curvilinear trailed lines that end in hooked arm el.	-	1	1
multiple curvilinear trailed lines	1	5	6
Totals	10	49	59

Engraved carinated bowls (n=2, Figure 65c), Belcher Engraved (n=3) carinated bowls and bottles (Figure 65b)—including a *var. Soda Lake* bottle (see Schambach and Miller 1984:120)—and a Hodges Engraved, *var. Sentell* vessel sherd (Figure 65a). Eight sherds are from Keno Trailed vessels (Figure 65d).

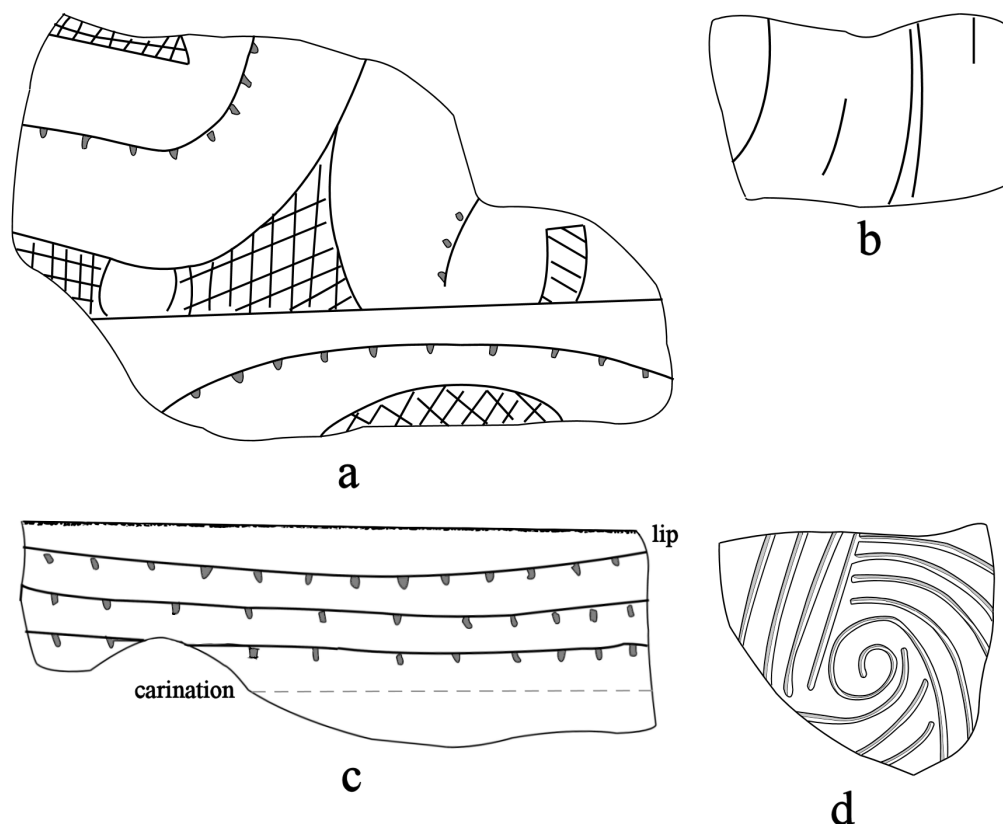


Figure 65. Selected decorative elements on fine ware sherds in Zone C at the Hatchel platform mound.

More than 21 percent of the grog-tempered fine ware sherds in Zone C have only a red slip on both interior and exterior vessel surfaces (see Table 13). Four other sherds have tick marks, most likely all from Simms Engraved or Hodges Engraved vessels.

The three grog-bone-tempered decorated sherds in Zone C include an incised-punctated body sherd and two red-slipped rim and body sherds (Table 14). None of the sherds can be typologically classified.

Both of the bone-tempered decorated sherds in Zone C are from utility ware vessels (Table 15). The applied sherd may be from the body of a McKinney Applied or Nash Neck Banded vessel, while the incised-punctated sherd is likely from a Crockett Curvilinear Incised vessel with an incised zone filled with cane punctations; this sherd was probably incorporated in mound fill gathered from one of the village areas near the mound that has a pre-A.D. 1300 ceramic assemblage (see Perttula and Nelson 2003; Perttula 2005a).

More than 83 percent of the shell-tempered decorated sherds in Zone C are from fine ware vessels (Table 16). The applied utility ware sherd is likely from a McKinney Applied, Nash Neck

Table 14. Grog-bone-tempered decorated sherds and decorated elements in Zone C.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Incised-Punctated</i>			
straight incised line-adjacent fingernail punctated row	-	1	1
Fine Ware			
<i>Red-Slipped</i>			
ext. red-slipped	-	1	1
int./ext. red-slipped	1	-	1
Totals	1	2	3

Table 15. Bone-tempered decorated sherds and decorated elements in Zone C.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Appliqued</i>			
straight appliqued ridge	-	1	1
<i>Incised-Punctated</i>			
incised zone filled with rows of cane punctations	-	1	1
Totals	-	2	2

Banded, or Emory Punctated-Incised vessel, while the tool punctated rim sherd is from an Emory Punctated-Incised jar.

Red-slipped shell-tempered body sherds in Zone C are either from Clement Redware vessels, or from the non-engraved portions of engraved fine wares, most likely Avery Engraved deep bowls (see Table 16). The engraved and engraved-slipped shell-tempered vessel sherds may also be from Avery

Table 16. Shell-tempered decorated sherds and decorated elements in Zone C.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Appliqued</i>			
straight appliqued fillet	-	1	1
<i>Punctated</i>			
horizontal tool punctated rows	1	-	1
Fine Ware			
<i>Engraved</i>			
1+ horizontal engraved line	-	1	1
<i>Engraved-Red-Slipped</i>			
multiple curvilinear engraved lines-int./ext. red-slipped	-	1	1
1-2+ widely-spaced horizontal engraved lines-int./ext. red-slipped	-	1	1
horizontal-curvilinear engraved lines-hatched triangle el.- excised pendant triangle el-int./ext. red-slipped (Avery Engraved)	-	1	1
<i>Red-Slipped</i>			
int./ext. red-slipped	-	5	5
<i>Trailed (Keno Trailed)</i>			
multiple curvilinear trailed lines	-	1	1
Totals	1	11	12

Engraved vessels. The remaining decorated shell-tempered sherd in Zone C is from a Keno Trailed, *var. unspecified* vessel.

Zone D Decorated Sherd Elements

There are two structures in Zone D. The first structure, Feature 11 is estimated at being a ca. 9 m circular structure located on the central part of the mound platform (Figure 66).

Portions of the wall post hole arc of Feature 12 are apparent in Zone D (see Figure 66), along with a central hearth and several areas of charred wood/charcoal. There are several small pits

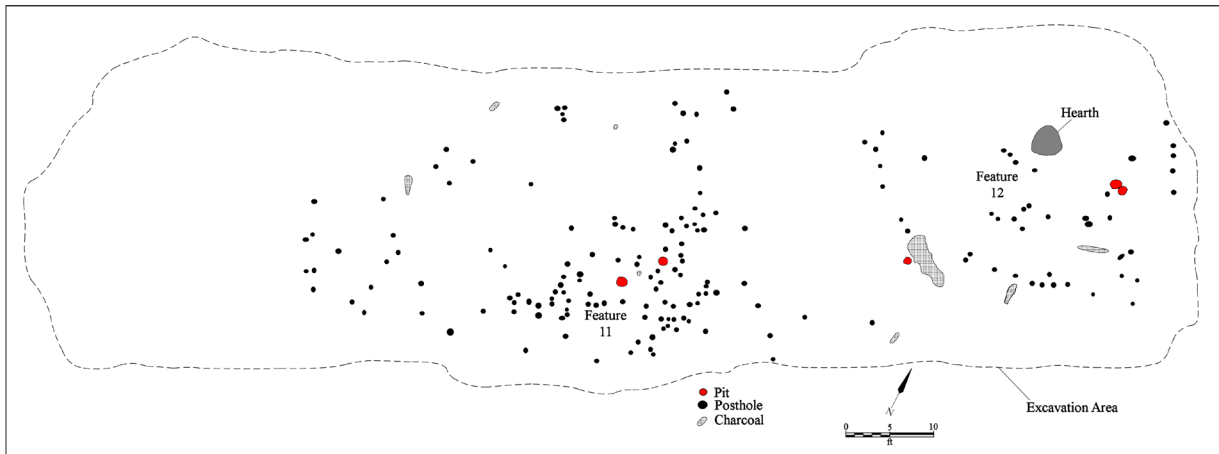


Figure 66. Plan map of Zone D structures and other features.

associated with both Features 11 and 12. Feature 12 has the highest number of sherds from Zone D features.

About 54 percent of the grog-tempered decorated sherds in Zone D are from utility wares, and the remaining 46 percent are from fine wares (Table 17). Sherds with incised and trailed decorative elements are the most common in the Zone D utility wares.

Sherds from applied vessels comprise 13 percent of the utility wares, including one sherd with at least three rows of applied nodes that may be from a Moore Noded vessel; the other applied sherds are likely from the body of McKinney Applied or Nash Neck Banded jars (see Table 17). Brushed, brushed-applied, and brushed-incised sherds (totaling eight sherds, or 15 percent of the utility wares) are from Karnack Brushed-Incised and Pease Brushed-Incised vessels.

The sherds from incised vessels include two sherds from Foster Trailed-Incised, *var. Foster* vessels with sets of short diagonal incised lines (Figure 67d). Two other sherds are from Hudson Incised vessels (Figure 67b-c) with incised zones filled with short hatched incised lines. The other incised sherds primarily have simple geometric elements, including rim sherds with at least one horizontal incised line (see Table 17).

Incised-punctated (5.8 percent of the utility wares) and fingernail punctated (1.9 percent) sherds only account for about 8 percent of the utility wares, including a rim sherd with horizontal and diagonal incised lines and a tool punctated row between the diagonal incised lines. Two other utility ware sherds are from McKinney Plain vessels with roughened exterior surfaces, and there are eight additional Foster Trailed-Incised, *var. unspecified* body sherds with trailed elements (see Table 17).

The grog-tempered fine ware sherds from Zone D include engraved, engraved-punctated, red-slipped, trailed, and trailed-incised vessels (see Table 17). Among these are Keno Trailed vessel sherds (n=5)—including a distinctive undetermined variety that has broad curvilinear trailed lines and well-executed cross-hatched incised zones (see Figure 67a)—Simms Engraved carinated bowl sherds (n=4, Figure 68a-b, d), Belcher Engraved vessel sherds (n=4), Barkman Engraved carinated bowl sherds (n=2, Figure 68c, e), and a sherd from a Hatchel Engraved bottle (Figure 68f).

Table 17. Grog-tempered decorated sherds and decorated elements in Zone D.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Appliqued</i>			
3+ rows of appliqued nodes	1	-	1
straight appliqued ridge	-	6	6
<i>Brushed</i>			
horizontal brushed marks	1	1	2
parallel brushed marks	-	1	1
vertical brushed marks	-	1	1
<i>Brushed-Appliqued</i>			
parallel brushed-straight appliqued ridge	-	1	1
<i>Brushed-Incised</i>			
parallel brushed-incised marks and lines	-	3	3
vertical brushed-incised marks and lines	-	2	2
<i>Incised</i>			
curvilinear zones with hatched incised lines (Hudson Incised)	-	1	1
multiple curvilinear incised lines	-	1	1
diagonal incised lines	-	1	1
2+ sets of short diagonal incised lines (Foster Trailed-Incised)	-	1	1
3+ sets of short diagonal incised lines (Foster Trailed-Incised)	1	-	1
1+ horizontal incised line	1	-	1
3+ horizontal incised lines	1	-	1
horizontal incised line at rim-body juncture	-	1	1
incised zone filled with short hatched incised lines (Hudson Incised)	-	1	1
opposed incised lines	-	1	1
parallel incised lines	-	7	7
straight incised line	-	2	2
vertical incised lines	-	1	1
vertical-curvilinear incised lines	-	1	1
<i>Incised-Punctated</i>			
circular incised el. filled with tool punctations	-	1	1

Table 17. Grog-tempered decorated sherds and decorated elements in Zone D, cont.

Decorative method and element	Rim	Body	N
horizontal and diagonal incised lines and tool punctated row between diagonal lines	1	-	1
parallel incised lines and adjacent zone of tool punctations	-	1	1
<i>Punctated</i>			
rows of fingernail punctations	-	1	1
<i>Roughened (McKinney Plain)</i>			
roughened surface	1	1	2
<i>Trailed (Foster Trailed-Incised)</i>			
opposed curvilinear trailed lines	-	1	1
multiple curvilinear trailed lines	-	3	3
horizontal trailed line	-	1	1
parallel trailed lines	-	3	3
<i>Trailed-Incised (Hudson Incised)</i>			
curvilinear trailed lines and curvilinear hatched zone	1	-	1
Fine Ware			
<i>Engraved</i>			
narrow hatched zone	-	1	1
cross-hatched engraved zone	-	1	1
curvilinear engraved line and narrow curvilinear hatched zone	-	2	2
opposed curvilinear engraved lines and hatched triangle el.	-	1	1
opposed curvilinear engraved lines with tick marks and horizontal hatched bracket divider (Hatchel Engraved)	-	1	1
curvilinear hatched zones	-	1	1
1+ horizontal engraved line	2	1	3
2+ horizontal engraved lines	3	-	3
3+ horizontal engraved lines	1	-	1
horizontal excised zone	-	1	1
horizontal-curvilinear lines and horizontal-vertical excised	-	1	1
horizontal engraved line-vertical bracket el.-hooked arm el. zone	-	1	1
horizontal-slanted scroll engraved lines	-	1	1
horizontal-vertical engraved lines and bracket el.	-	1	1
closely spaced parallel engraved lines	-	1	1

Table 17. Grog-tempered decorated sherds and decorated elements in Zone D, cont.

Decorative method and element	Rim	Body	N
straight engraved line	-	1	1
vertical engraved lines	-	1	1
horizontal scroll line with tick marks-hatched scroll fill zones-vertical curvilinear engraved line with hatched triangle el. (Barkman Engraved)	1	-	1
horizontal engraved lines with tick marks and narrow vertical hatched column (Barkman Engraved)	-	1	1
horizontal-vertical engraved lines and bracket el.-panel of horizontal engraved lines with tick marks (Simms Engraved)	1	-	1
<i>Engraved-Punctated</i>			
diagonal engraved line with tick marks-set of vertical engraved lines-horizontal row of excised punctations (Belcher Engraved)	-	1	1
horizontal engraved line above row of excised punctations (Belcher Engraved)	1	-	1
horizontal engraved line below row of excised punctations (Belcher Engraved)	1	-	1
horizontal engraved line above and below rows of excised punctations (Belcher Engraved)	1	-	1
horizontal engraved lines with row of excised punctations between lines (Simms Engraved)	1	1	2
horizontal engraved lines with row of excised punctations between lines; rows divided by sets of vertical engraved lines (Simms Engraved)	1	-	1
straight engraved line-excised punctated row	-	1	1
<i>Red-Slipped</i>			
in./ext. red-slipped	-	5	5
<i>Trailed (Keno Trailed)</i>			
multiple curvilinear trailed lines	-	2	2
<i>Trailed-Incised (Keno Trailed)</i>			
curvilinear trailed lines-cross-hatched incised zone	-	3	3
Totals	21	75	96

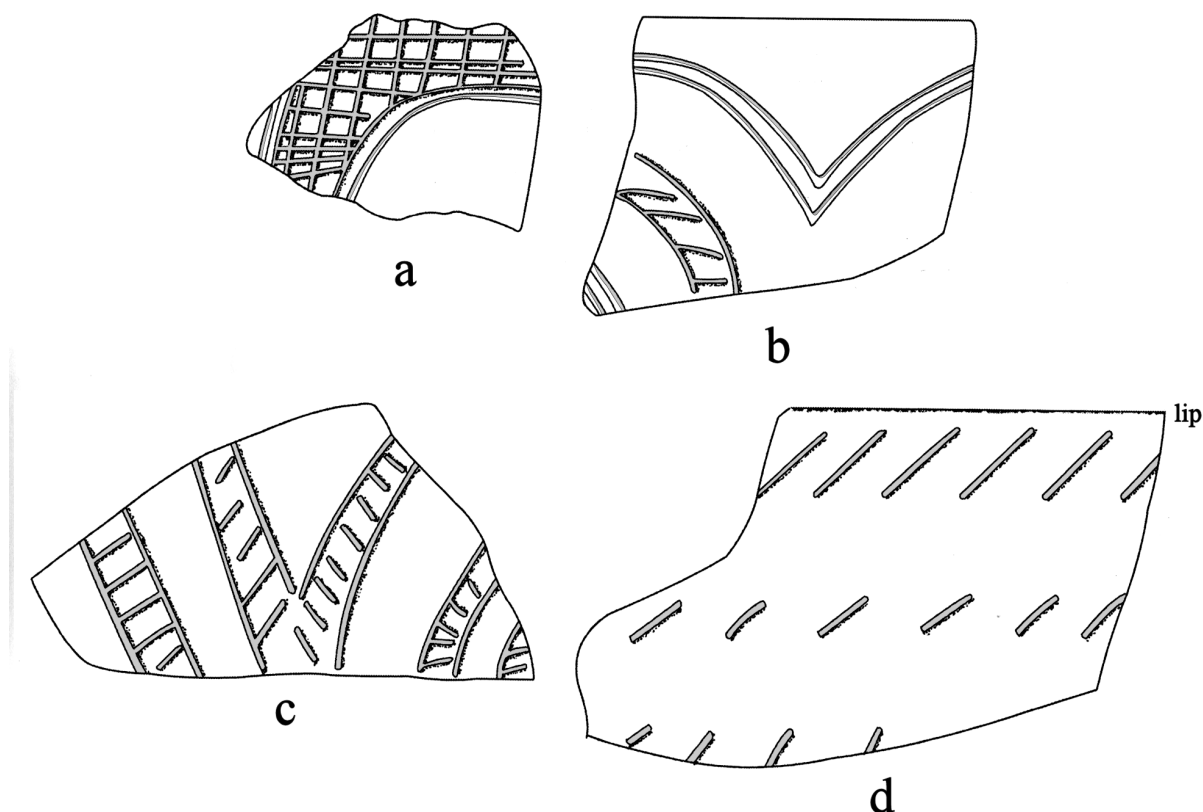


Figure 67. Selected decorative elements on utility ware sherds from Zone D in the Hatchel platform mound excavations.

Five other fine ware body sherds (11.4 percent of the fine wares in Zone D) have only a red slip on both interior and exterior vessel surfaces (see Table 17). Five of the engraved sherds have excised tick marks on engraved lines, including sherds from Barkman Engraved, Belcher Engraved, Hatchel Engraved, and Simms Engraved vessels.

Seventy-five percent of the grog-bone-tempered decorated sherds in Zone D are from utility wares (Table 18). This includes Foster Trailed-Incised body sherds ($n=2$), a Pease Brushed-Incised rim sherd with vertical brushed marks to one side of a vertical applied ridge, as well as sherds from Karnack Brushed-Incised, applied, and incised vessels. Both fine ware sherds are from Keno Trailed vessels.

The few bone-tempered decorated sherds in Zone D are divided between Foster Trailed-Incised, *var. unspecified* body sherds and two fine ware body sherds with interior-exterior red-slipped surfaces (Table 19). One of the red-slipped sherds has curvilinear engraved lines, and this sherd may be from a Taylor Engraved bowl or carinated bowl.

The decorated shell-tempered sherds in Zone D are only from fine wares (Table 20). They include four rim and body sherds from Clement Redware vessels and two body sherds from Keno Trailed, *var. unspecified* body sherds.

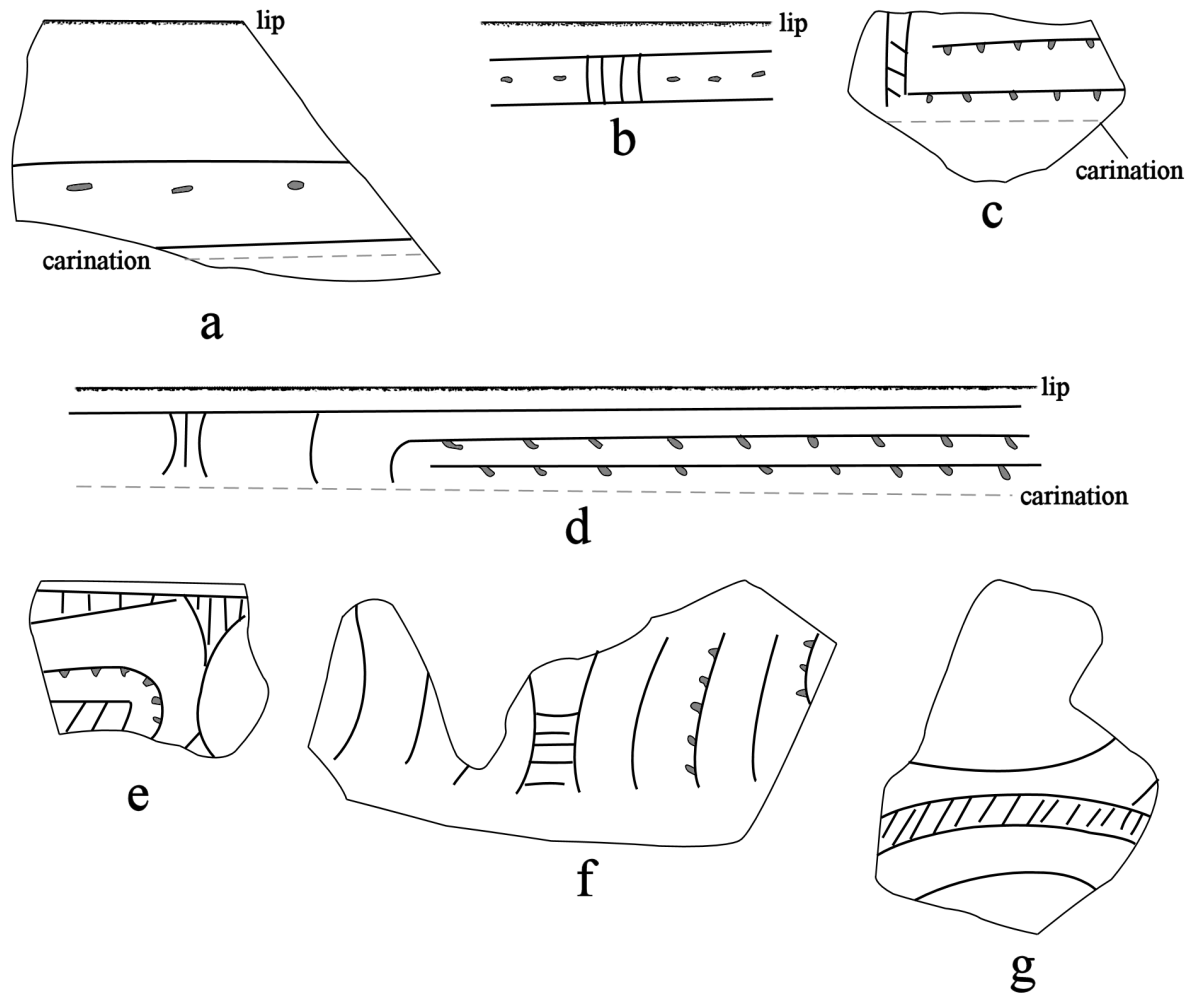


Figure 68. Selected decorative elements on fine ware sherds from Zone D at the Hatchel platform mound.

Table 18. Grog-bone-tempered decorated sherds and decorated elements in Zone D.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Appliqued</i>			
straight applied fillet	-	1	1
<i>Brushed</i>			
parallel brushed	-	1	1
<i>Brushed-Appliqued</i>			
vertical brushed-vertical applied ridge (Pease Brushed-Incised)	1	-	1

Table 18. Grog-bone-tempered decorated sherds and decorated elements in Zone D, cont.

Decorative method and element	Rim	Body	N
<i>Incised</i>			
short diagonal incised lines (Foster Trailed-Incised)	-	1	1
straight incised line	-	1	1
<i>Trailed (Foster Trailed-Incised)</i>			
multiple curvilinear trailed lines	-	1	1
Fine Ware			
<i>Trailed (Keno Trailed)</i>			
multiple curvilinear trailed lines	-	1	1
multiple opposed curvilinear trailed lines	-	1	1
Totals	1	7	8

Table 19. Bone-tempered decorated sherds and decorated elements in Zone D.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Trailed (Foster Trailed-Incised)</i>			
multiple curvilinear trailed lines	-	2	2
Fine Ware			
<i>Engraved-Red-Slipped</i>			
curvilinear engraved lines-int./ext. red-slipped	-	1	1
<i>Red-Slipped</i>			
int./ext. red-slipped	-	1	1
Totals	-	4	4

Table 20. Shell-tempered decorated sherds and decorated elements in Zone D.

Decorative method and element	Rim	Body	N
Fine Ware			
<i>Red-slipped</i>			
int./ext. red-slipped	1	3	4
<i>Trailed (Keno Trailed)</i>			
curvilinear trailed lines	-	1	1
horizontal-curvilinear trailed lines	-	1	1
Totals	1	5	6

Zone E Decorated Sherd Elements

There are two circular structures in Zone E: Features 13 and 14. Both are roughly the same size (Figure 69), ranging in diameter from 8.84-9.06 m. They are situated in the central and western portions of the Zone E platform, while the eastern portion of the mound platform has a scattering of post holes, one large pit feature, several small pits, and Burial 1. The few post holes that contained charcoal suggest that the “posts were burned to the level of the floor” (Beatty 1939:200) when the structures were burned down.

Feature 13 has two associated ash deposits and two internal pit features (see Figure 69); there are also “black humic” or midden deposits associated with this feature (Beatty 1939:214). Feature

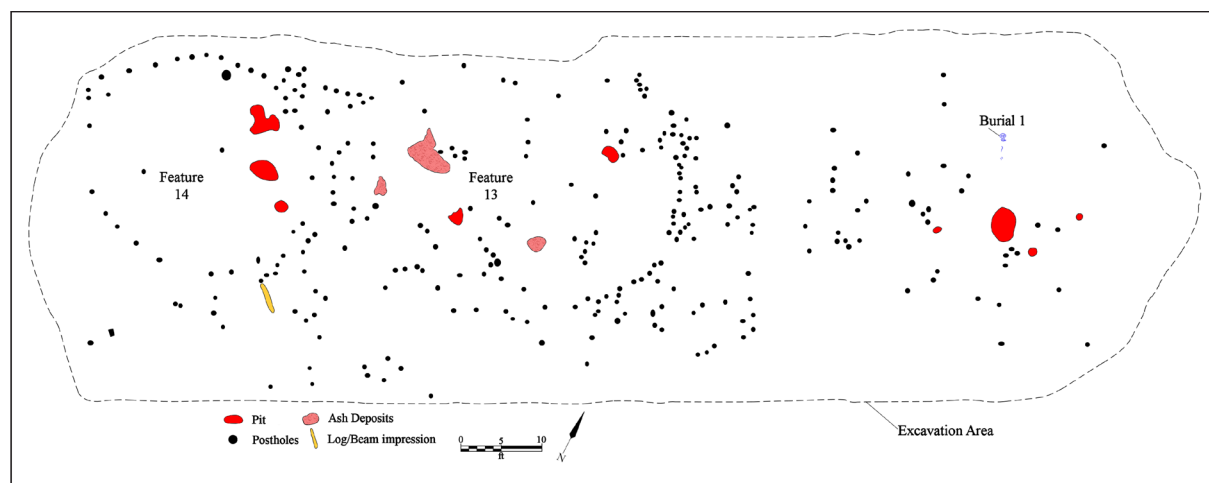


Figure 69. Plan map of Zone E structures and other features in the Hatchel platform mound excavations.

14 may have had a prepared red clay floor (Beatty 1939:218), but no central hearth. There are several large pit features near the northern and eastern walls. There are also several post holes and a log beam impression that suggest this structure had an entranceway facing to the southeast (see Figure 69), as well as a single post that may have deliberately blocked the entrance.

More than 55 percent of the grog-tempered decorated sherds in Zone E are from utility ware vessels (Table 21). Most commonly these sherds are from vessels with brushed or incised decorative

Table 21. Grog-tempered decorated sherds and decorated elements in Zone E.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Appliqued</i>			
parallel appliqued ridges	-	3	3
straight appliqued fillet	-	1	1
straight appliqued ridge	-	4	4
<i>Appliqued-Punctated</i>			
row of appliqued nodes and fingernail punctated rows	1	-	1
<i>Brushed</i>			
diagonal brushed marks	-	1	1
horizontal brushed marks	2	1	3
parallel brushed marks	-	12	12
vertical brushed marks	-	2	2
<i>Brushed-Appliqued</i>			
parallel brushed-straight appliqued ridge (Pease Brushed-Incised)	-	1	1
<i>Brushed-Incised</i>			
opposed brushed-incised marks and lines	-	1	1
parallel brushed-incised marks and lines	-	9	9
parallel brushed and overlying diagonal incised line	-	1	1
vertical brushed-incised marks and lines	-	1	1
vertical brushed marks [rim] and diagonal opposed incised lines [body] (Pease Brushed-Incised)	1	-	1
<i>Incised</i>			
curvilinear incised lines and curvilinear hatched zone	1	-	1
2+ sets of short diagonal incised lines (Foster Trailed-Incised)	-	1	1
1+ horizontal incised line and suspension hole	1	-	1
3+ horizontal incised lines	1	-	1
closely-spaced parallel incised lines	-	3	3

Table 21. Grog-tempered decorated sherds and decorated elements in Zone E, cont.

Decorative method and element	Rim	Body	N
parallel incised lines	-	10	10
straight incised line	-	2	2
vertical incised lines	-	4	4
vertical incised lines and offset diagonal opposed incised lines (Pease Brushed-Incised)	-	1	1
<i>Incised-Punctated</i>			
curvilinear incised zones filled with tool punctations	-	1	1
diagonal incised lines pitched in opposite directions with tool punctated rows above and between tool punctated rows (Sanson Incised)	1	-	1
horizontal and diagonal incised lines-tool punctated row between diagonal lines	1	-	1
<i>Neck Banded (Nash Neck Banded)</i>			
horizontal neck bands	1	3	4
<i>Punctated</i>			
tool punctated rows	-	1	1
<i>Ridged (Belcher Ridged)</i>			
parallel ridges	-	1	1
straight ridge	-	1	1
<i>Ridged-Brushed (Belcher Ridged)</i>			
vertical ridged-brushed marks	1	-	1
<i>Roughened (McKinney Plain)</i>			
roughened surface	2	3	5
<i>Stamped (Cowhide Stamped)</i>			
incised zones filled with stamped rows	-	4	4
<i>Trailed (Foster Trailed-Incised)</i>			
multiple curvilinear trailed lines	-	1	1
parallel trailed lines	-	1	1
straight trailed line	-	1	1
<i>Trailed-Appliqued (Foster Trailed-Incised)</i>			
opposed curvilinear trailed lines-straight appliqued fillet	-	1	1

Table 21. Grog-tempered decorated sherds and decorated elements in Zone E, cont.

Decorative method and element	Rim	Body	N
<i>Trailed-Appliqued-Incised (Foster Trailed-Incised)</i>			
curvilinear trailed lines around applied node divided by crossed incised lines	-	1	1
<i>Trailed-Incised (Foster Trailed-Incised)</i>			
1+ set of short diagonal incised lines above straight trailed line	-	1	1
short vertical incised lines-horizontal trailed line	-	1	1
Fine Ware			
<i>Engraved</i>			
concentric circle engraved lines with open pendant triangles . (Avery Engraved)	-	1	1
curvilinear engraved lines, multiple	-	3	3
curvilinear engraved lines and hatched triangle el.	-	1	1
curvilinear engraved lines and excised or hatched triangle el. (Avery Engraved)	-	1	1
curvilinear engraved lines and curvilinear hatched zone	-	1	1
curvilinear cross-hatched zone/zones (Hodges Engraved)	-	3	3
diagonal engraved line/lines	-	3	3
narrow hatched zone	-	1	1
horizontal engraved line under the lip	1	-	1
1+ horizontal engraved line	3	4	7
2+ horizontal engraved lines, widely-spaced	1	-	1
2+ horizontal engraved lines-lip notched (Simms Engraved)	1	-	1
3+ horizontal engraved lines	1	-	1
1+ horizontal engraved line and hatched bracket el.	-	1	1
2+ horizontal engraved lines and cross-hatched bracket el.- lip notched (Simms Engraved)	1	-	1
diagonal-straight engraved lines and diagonal tick marks	-	1	1
1+ horizontal engraved line-excised tick marks	-	1	1
2 horizontal engraved lines and diagonal tick marks (cf. Simms Engraved)	1	-	1
horizontal engraved line and excised tick marks	-	1	1
horizontal engraved line with tick marks and vertical engraved lines (Barkman Engraved)	-	1	1

Table 21. Grog-tempered decorated sherds and decorated elements in Zone E, cont.

Decorative method and element	Rim	Body	N
horizontal engraved lines with tick marks-vertical curvilinear engraved lines (Simms Engraved)	1	-	1
horizontal-diagonal engraved lines	-	1	1
horizontal-diagonal engraved lines-vertical curvilinear lines and bracket el. dividers-excised pendant triangles (Simms Engraved)	1	-	1
horizontal-vertical engraved lines	1	-	1
horizontal-vertical engraved lines-hatched bracket el.	-	1	1
opposed engraved lines	-	1	1
parallel engraved lines-excised triangles	-	1	1
semi-circular engraved lines	-	1	1
vertical engraved line	-	1	1
slanting scroll line and lower scroll fill zone with a set of vertical engraved lines and triangular excised area (Barkman Engraved)	-	1	1
upper and lower scroll fill zones with sets of curvilinear lines (Barkman Engraved)	-	1	1
<i>Engraved-Punctated</i>			
circular engraved lines with slot-like punctations between the engraved lines (Belcher Engraved)	-	1	1
horizontal engraved lines-excised punctated rows (Belcher Engraved)	1	-	1
horizontal engraved line with excised punctated row above (Simms Engraved)	-	1	1
horizontal engraved lines with excised punctated row above one line and between two other lines (Belcher Engraved)	1	-	1
horizontal engraved lines above excised punctated row (Belcher Engraved)	1	-	1
horizontal-curvilinear engraved lines with row of excised punctations between them (Simms Engraved)	1	-	1
horizontal-curvilinear engraved lines with row of excised punctations between-vertical cross-hatched bracket el. (Simms Engraved)	1	-	1
horizontal-diagonal engraved lines-excised punctated row between the lines (Simms Engraved)	1	1	2
horizontal-vertical engraved lines-excised punctated row between the lines (Simms Engraved)	1	-	1

Table 21. Grog-tempered decorated sherds and decorated elements in Zone E, cont.

Decorative method and element	Rim	Body	N
diagonal engraved line with tick marks-excised punctated row at carination	-	1	1
horizontal engraved lines with tick marks-row of excised punctations between them (Simms Engraved)	1	-	1
horizontal engraved lines with tick marks-excised punctated row between engraved lines (Barkman Engraved)	-	1	1
horizontal-vertical-curvilinear engraved lines-tick marks- excised punctated row (Barkman Engraved)	1	-	1
interlocking slanting scroll lines with tick marks-excised punctated row at carination (Barkman Engraved)	-	1	1
<i>Engraved-Red-Slipped</i>			
widely-spaced horizontal engraved lines-int./ext. red-slipped	2	1	3
<i>Red-Slipped</i>			
int./ext. red-slipped	-	8	8
<i>Trailed (Keno Trailed)</i>			
multiple curvilinear trailed lines	-	3	3
straight trailed line	-	1	1
<i>Trailed-Incised (Keno Trailed)</i>			
straight trailed line and adjacent cross-hatched incised zone	-	1	1
Totals	36	130	166

elements, including Karnack Brushed-Incised and Foster Trailed-Incised vessels, as well as vessels with appliqued or trailed decorative elements.

Sherds from grog-tempered appliqued and appliqued-punctated decorative elements account for about 10 percent of the Zone E utility wares, and these are likely from McKinney Appliqued or Nash Neck Banded jars. One rim sherd has a row of appliqued nodes and adjacent rows of fingernail punctations (see Table 21). Brushed, brushed-appliqued, and brushed-incised sherds from Karnack Brushed-Incised and Pease Brushed-Incised vessels comprise almost 35 percent of the utility wares in this zone, among them vessels with either horizontal or vertical brushing marks on the rim and likely vertical brushed or vertical brushed-incised decorative elements on vessel bodies; one rim sherd has a vertical brushed rim and diagonal opposed incised lines on the vessel body (see Table 21).

Grog-tempered sherds from vessels with incised decorative elements (n=24, 26 percent of the utility ware sherds in Zone E) include rims with horizontal incised lines as well as a rim with

curvilinear incised lines and a curvilinear hatched zone (Figure 70c). One body sherd is from a Foster Trailed-Incised, *var. Foster* sherd with short diagonal incised lines on the rim, as well as another Pease Brushed-Incised vessel sherd with vertical incised lines on the rim and diagonal opposed incised lines on the vessel body (see Table 21). Other incised sherds have simple geometric elements. Only three rim or body sherds (3.3 percent of these Zone E utility wares) from grog-tempered vessels have incised-punctated elements, including a Sanson Incised rim sherd (Figure 70d). Similar sherds are present in zones B and G in the Hatchel mound deposits. Another incised-punctated sherd in Zone E has curvilinear incised zones filled with small tool punctations (Figure 70b).

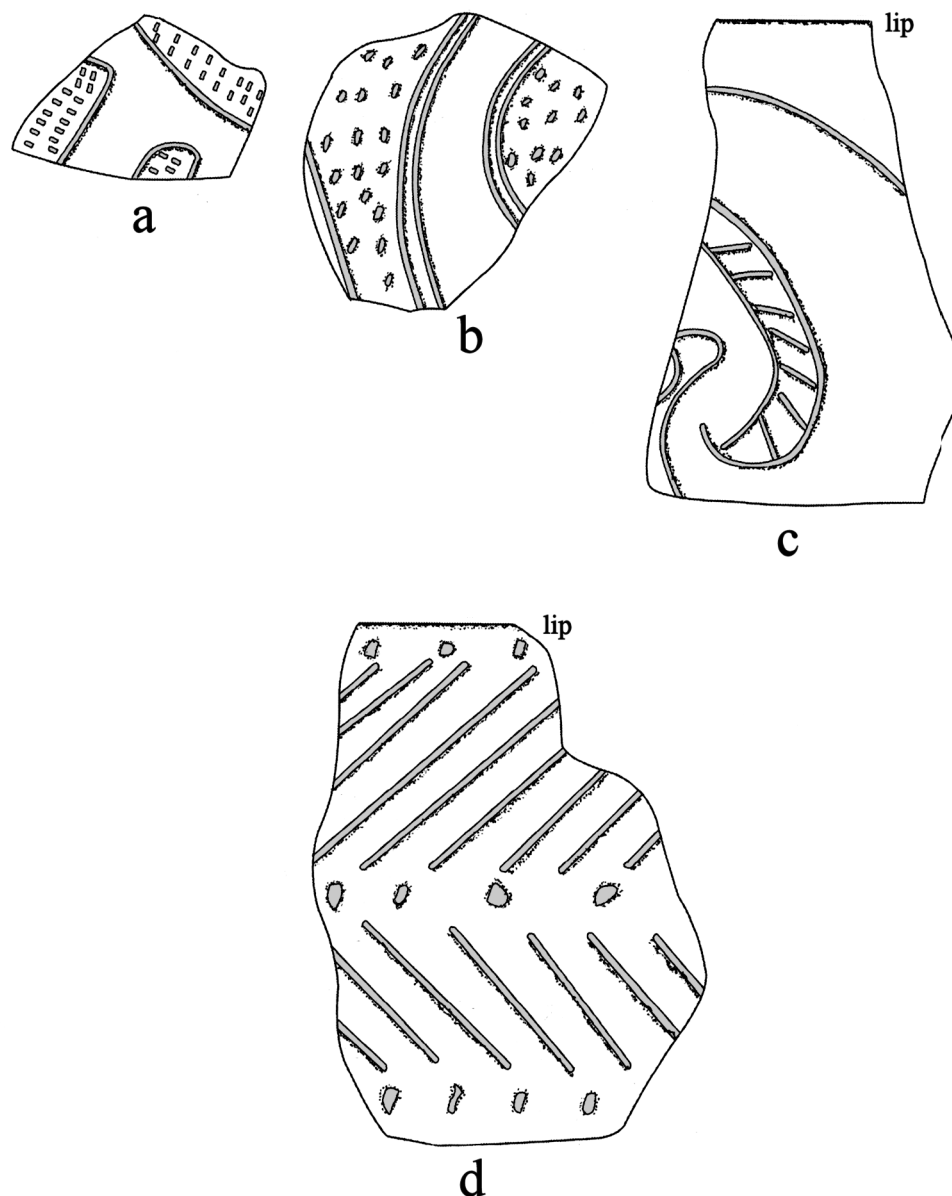


Figure 70. Selected decorative elements in the grog-tempered utility ware sherds in Zone E in the Hatchel platform mound.

Other Zone E grog-tempered utility wares include rim and body sherds from Nash Neck Banded jars (4.3 percent), a single tool punctated body sherd, two varieties of Belcher Ridged (*var. Belcher* and *var. Byram's Ferry*, 3.3 percent), rim and body sherds from McKinney Plain vessels (5.4 percent), and body sherds from Cowhide Stamped vessels with incised zones filled with dentate stamped rows (see Figure 70a). Body sherds from Foster Trailed-Incised, *var. Foster* and *var. Dobson* vessels comprise 7.6 percent of the grog-tempered utility wares in Zone E (see Table 21).

The grog-tempered fine ware sherds in Zone E are from vessels with engraved, engraved-punctated, engraved-red-slipped, red-slipped, trailed, and trailed-incised decorative elements (see Table 21). Carinated bowl sherds from Barkman Engraved (n=6, Figure 71d-e, h), Belcher Engraved (n=3, Figure 71a), and Simms Engraved (n=12, Figure 71c, f-g) vessels are abundant in Zone E, along with Keno Trailed bottle sherds (6.8 percent of the grog-tempered fine wares in Zone E). Two of the Barkman Engraved sherds are from *var. Clear Lake* vessels that have slanting scroll lines and upper and lower scroll fill zones (see Table 21). Bottle sherds in the grog-tempered fine wares in Zone E are from Hodges Engraved (n=1), Avery Engraved (n=2, Figures 71b and Figure 72a), and Belcher Engraved, *var. Soda Lake* (Figure 72a) vessels.

Almost 15 percent of the Zone E grog-tempered fine ware sherds are from vessels with interior-exterior red-slipped surfaces, including three likely from compound bowls with widely-spaced horizontal engraved lines on the rims (see Table 21). The same proportion of fine ware sherds have excised tick marks on engraved lines as part of distinct motifs on Simms Engraved and Barkman Engraved carinated bowls. One Simms Engraved vessel has lip notching (see Figure 72f).

About 61 percent of the grog-bone-tempered decorated sherds in Zone E are from utility ware vessels (Table 22). These include rim and body sherds from brushed and brushed-incised Karnack Brushed jars, three sherds from incised vessels, including a rim sherd from a Foster Trailed-Incised, *var. Foster* rim sherd, a body sherd from a Foster Trailed-Incised, *var. unspecified* vessel, and one body sherd from a McKinney Plain vessel.

The engraved sherds are rims from vessels with at least one horizontal engraved line encircling the vessel, including one rim with a single horizontal engraved line and a set of vertical engraved lines, possibly from a Barkman Engraved vessel (see Suhm and Jelks 1962:Plate 4). The one remaining grog-bone-tempered fine ware sherd in Zone E is a Keno Trailed, *var. unspecified* body sherd with multiple curvilinear trailed lines (see Table 22).

The two bone-tempered decorated sherds in Zone E are from fine ware vessels (Table 23). One is a body sherd from a red-slipped Avery Engraved vessel with a hatched triangle element, and the other is a body sherd with both interior and exterior red-slipped surfaces.

The shell-tempered decorated sherds in Zone E are from both utility ware and fine ware vessels (Table 24) that were manufactured in either upstream or downstream locales from the Hatchel site. The utility wares include a body sherd from a likely Moore Noded vessel as well as two body sherds with a single straight applied ridge; these sherds may be from the body of McKinney Applied or Nash Neck Banded jars. The remaining shell-tempered utility ware sherd is a Nash Neck Banded rim sherd.

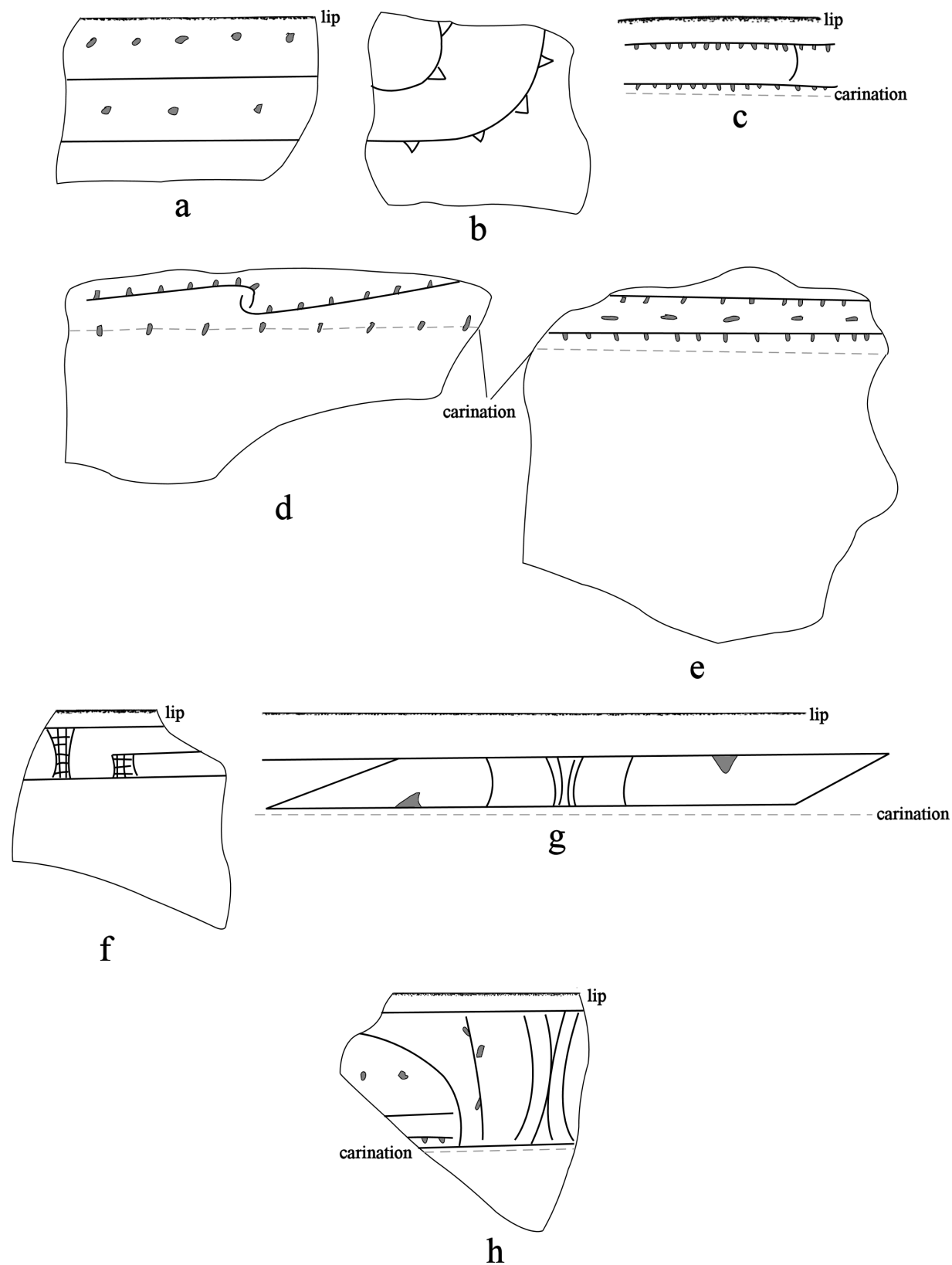


Figure 71. Selected decorative elements on grog-tempered fine ware sherds in Zone E in the Hatchel platform mound.

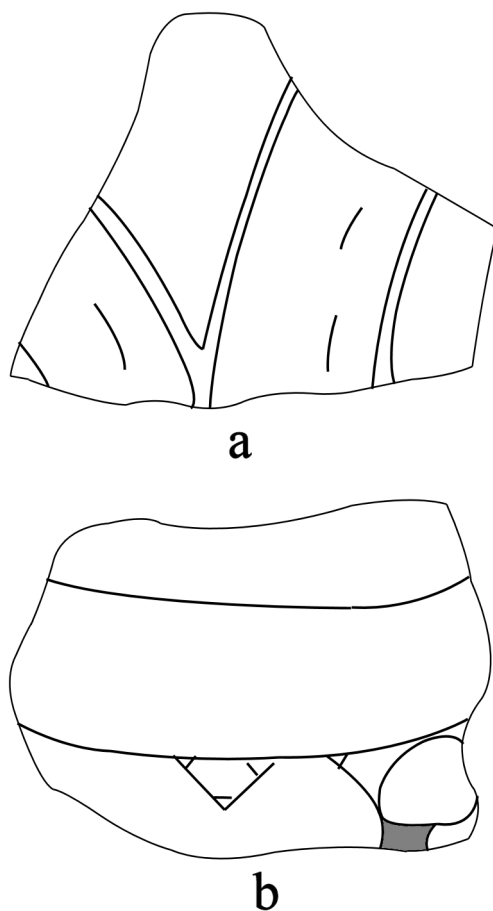


Figure 72. Selected decorative elements on grog-tempered fine ware bottle sherds in Zone E in the Hatchel platform mound.

Table 22. Grog-bone-tempered decorated sherds and decorated elements in Zone E.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Brushed</i>			
horizontal brushed	2	-	2
<i>Brushed-Incised</i>			
horizontal incised lines [rim]-vertical brushed marks [body]	-	1	1
<i>Incised</i>			
1+ set of short diagonal incised lines (Foster Trailed-Incised)	1	-	1
closely-spaced parallel incised lines	-	2	2

Table 22. Grog-bone-tempered decorated sherds and decorated elements in Zone E, cont.

Decorative method and element	Rim	Body	N
<i>Roughened (McKinney Plain)</i>			
roughened surface	-	1	1
<i>Trailed (Foster Trailed-Incised)</i>			
multiple curvilinear trailed lines	-	1	1
Fine Ware			
<i>Engraved</i>			
1+ horizontal engraved line	2	-	2
2+ horizontal engraved lines	1	-	1
horizontal engraved line-set of vertical engraved lines	1	-	1
<i>Trailed (Keno Trailed)</i>			
multiple curvilinear trailed lines	-	1	1
Totals	7	6	13

Table 23. Bone-tempered decorated sherds and decorated elements in Zone E.

Decorative method and element	Rim	Body	N
Fine Ware			
<i>Engraved-Red-Slipped</i>			
horizontal engraved line-hatched triangle el.-int./ext. red-slipped (Avery Engraved)	-	1	1
<i>Red-Slipped</i>			
int./ext. red-slipped	-	1	1
Totals	-	2	2

Table 24. Shell-tempered decorated sherds and decorated elements in Zone E.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Appliqued</i>			
2+ rows of appliqued nodes	-	1	1
straight appliqued ridge	-	2	2
<i>Neck Banded (Nash Neck Banded)</i>			
horizontal neck banded rows	1	-	1
Fine Ware			
<i>Engraved-Red-Slipped</i>			
hatched triangle el.-int./ext. red-slipped (Avery Engraved)	-	1	1
widely-spaced horizontal engraved lines-int./ext. red-slipped (Avery Engraved)	1	-	1
<i>Red-Slipped</i>			
int./ext. red-slipped	-	1	1
Totals	2	5	7

The shell-tempered fine ware sherds in Zone E are from Avery Engraved vessels (n=2 sherds) with interior-exterior red slipped surfaces as well as a body sherd from a Clement Redware vessel (see Table 24). These sherds are from vessels manufactured by McCurtain phase potters living upstream in the Mound Prairie area of the Red River valley.

Zone F Decorated Sherd Elements

The central part of the Zone F mound platform, lying ca. 30 cm below Zone E (Beatty 1939:238), is dominated by a single large (9.75 m in diameter) circular structure (Feature 15) with a hard-packed floor, and with a 1.3 m extended entranceway that faced to the southeast (Figure 73). The remnants of two unburned cedar posts were found in two of the post holes in the entranceway (Beatty 1939:248). Within the structure is one small ash deposit and four identified pits (Beatty 1939:249); it is probable that these pits represent four support posts for the structure. After Zone G mound deposits were laid down, Feature 15 was built directly over Feature 22 in Zone G.

The rest of the Zone F mound platform is open. There is one large ash deposit about 6 m east of Feature 15, as well as six large patches of a "black humic deposit" to the immediate south, east, and west of the structure; these may represent localized midden deposits. Burial 2 is more than 10 m

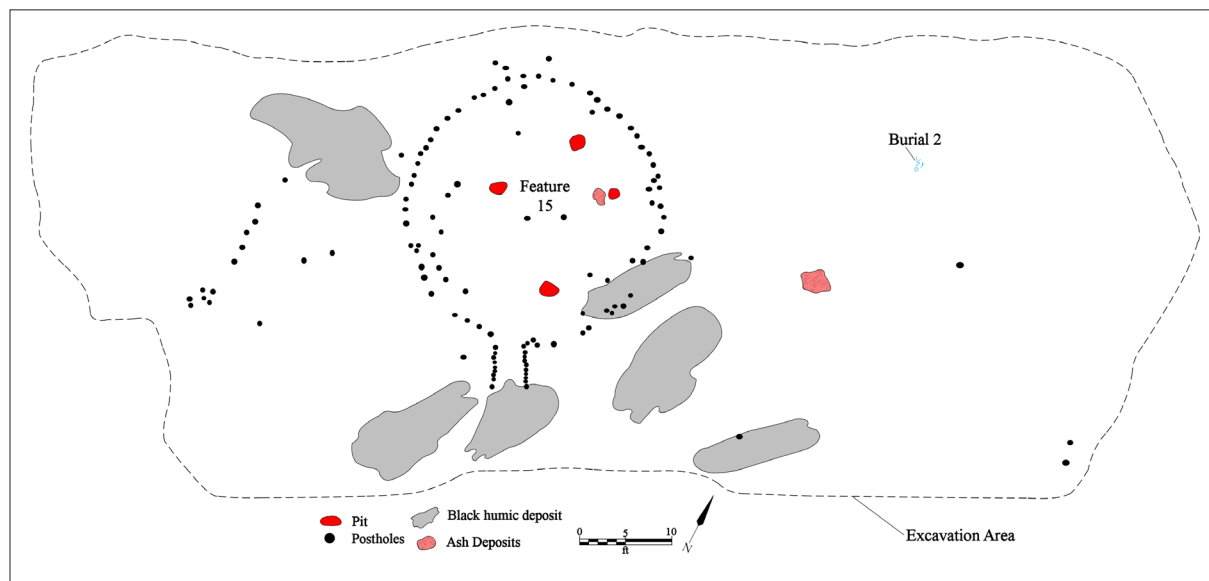


Figure 73. Plan map of Zone F structures and other features in the Hatchel site platform mound.

east of Feature 15. Finally, there is a 4 m long arc of post holes about 5.5 m west of Feature 15 (see Figure 73); this may represent a screen or partition, or a part of a second poorly preserved structure on Zone F.

Grog-tempered utility wares account for 60.5 percent of the decorated sherds in Zone F (Table 25) in the Hatchel platform mound. This is especially the case for sherds from vessels with brushed (34.6 percent of the utility ware), brushed-incised (18.0 percent), and incised (15.6 percent) decorative elements, including sherds from Karnack Brushed-Incised and Foster Trailed-Incised vessels.

Sherds from vessels with applied nodes, fillets, and ridges are common among the grog-tempered utility wares in Zone F, comprising 9.8 percent of the assemblage (see Table 25). Among the Karnack Brushed-Incised sherds with brushed marks, there are rims with horizontal and vertical brushed marks, as well as one rim with horizontal brushed marks and a tool punctated row at the rim-body juncture. Brushing on vessel bodies is primarily oriented vertically (or parallel in orientation), but there are a few where the brushing marks are curvilinear or opposed; in one instance, a body sherd with parallel brushed-incised marks and lines had opposed incised lines drawn over and through the brushed-incised decorative elements.

The rims with incised decorative elements among the grog-tempered sherds in Zone F have either horizontal incised lines or horizontal incised lines dividing zones of diagonal incised lines (Figure 74a). The latter sherd is from a Foster Trailed-Incised, *var. Dobson* jar (see Schambach and Miller 1984:121). Body sherds have simple geometric incised elements, and one body sherd from a Pease Brushed-Incised vessel has zones of cross-hatched and diagonal opposed incised lines (Figure 74b). Another Pease Brushed-Incised body sherd has a straight incised line adjacent to a straight applied ridge (see Table 25).

The few incised-punctated grog-tempered body sherds in Zone F (2.4 percent of the utility wares in this zone) have either incised zones filled with tool punctations or incised lines adjacent

Table 25. Grog-tempered decorated sherds and decorated elements in Zone F.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Appliqued</i>			
appliqued node	-	1	1
straight appliqued fillet	-	1	1
straight appliqued ridge	-	16	16
vertical appliqued ridge	-	1	1
<i>Appliqued-Punctated</i>			
straight appliqued ridge-tool punctated row	-	1	1
<i>Brushed</i>			
curvilinear brushed marks	-	1	1
horizontal brushed marks	4	-	4
horizontal-vertical brushed marks	-	1	1
parallel brushed marks	-	62	62
vertical brushed marks	1	2	3
<i>Brushed-Appliqued</i>			
parallel brushed-straight appliqued ridge	-	3	3
<i>Brushed-Incised</i>			
diagonal brushed-incised marks and lines	-	1	1
horizontal brushed marks and overlying vertical incised lines	-	1	1
1+ horizontal incised line-horizontal brushed marks	-	1	1
opposed brushed-incised marks and lines	-	2	2
parallel brushed-incised marks and lines	-	26	26
parallel brushed-adjacent straight incised line	-	1	1
parallel brushed-incised marks and lines and overlying opposed incised lines	-	1	1
vertical brushed-incised marks and lines	-	4	4
<i>Brushed-Punctated</i>			
horizontal brushed-tool punctated row at rim-body juncture	1	-	1
parallel brushed-tool punctated row through the brushing	-	1	1
vertical brushing marks [body]-tool punctated row at rim-body juncture	-	1	1
<i>Incised</i>			
diagonal opposed incised triangles in horizontal zone-	-	1	1
horizontal incised lines-cross-hatched incised zone (Pease Brushed-Incised)			

Table 25. Grog-tempered decorated sherds and decorated elements in Zone F, cont.

Decorative method and element	Rim	Body	N
2+ horizontal incised lines	1	-	1
horizontal incised line-diagonal hatched zone (Foster Trailed-Incised)	1	-	1
closely-spaced parallel incised lines	-	1	1
parallel incised lines	-	23	23
straight incised line	-	3	3
vertical incised lines	-	1	1
vertical and diagonal opposed incised lines (Pease Brushed-Incised)	-	1	1
<i>Incised-Appliqued</i>			
straight incised line-adjacent straight appliqued ridge (Pease Brushed-Incised)	-	1	1
<i>Incised-Punctated</i>			
incised triangular zone filled with cane punctations (cf. Crockett Curvilinear Incised)	-	1	1
rectilinear incised zone filled with tool punctations	-	2	2
tool punctated row-adjacent straight incised line	-	1	1
straight incised line-adjacent fingernail punctated row	-	2	2
<i>Neck Banded (Nash Neck Banded)</i>			
horizontal neck bands	4	6	10
<i>Neck Banded-Incised (Nash Neck Banded)</i>			
horizontal neck bands-vertical incised lines	1	-	1
<i>Punctated</i>			
fingernail punctated row	-	1	1
<i>Ridged-Brushed (Belcher Ridged)</i>			
parallel ridged-parallel brushed marks	-	1	1
<i>Roughened (McKinney Plain)</i>			
roughened surface	6	2	8
<i>Roughened-Appliqued (McKinney Appliqued)</i>			
roughened surface and vertical appliqued lug handle	-	1	1
<i>Roughened-Incised (McKinney Plain)</i>			
roughened surface and adjacent horizontal incised line	-	1	1

Table 25. Grog-tempered decorated sherds and decorated elements in Zone F, cont.

Decorative method and element	Rim	Body	N
roughened surface and horizontal incised line at rim-body junction	-	1	1
<i>Trailed (Foster Trailed-Incised)</i>			
multiple curvilinear trailed lines	-	5	5
single curvilinear trailed line	-	1	1
straight trailed line	-	1	1
<i>Trailed-Appliqued (Foster Trailed-Incised, var. Foster)</i>			
concentric trailed circles and a central appliqued node	-	1	1
Fine Ware			
<i>Engraved</i>			
circular lines and bracket-shaped el.-negative oval	-	1	1
cross-hatched engraved zone	-	1	1
curvilinear engraved lines	-	7	7
curvilinear engraved line-horizontal-vertical engraved lines	-	1	1
curvilinear-straight engraved lines	-	1	1
diagonal opposed engraved lines	-	1	1
diagonal zigzag engraved line	-	1	1
hatched triangle el.	-	1	1
hooked arm el. with curvilinear hatched zone	1	-	1
1+ horizontal engraved line	8	4	12
2+ horizontal engraved lines	2	3	5
3+ horizontal engraved lines	2	-	2
3+ horizontal engraved lines, widely-spaced	-	2	2
4+ horizontal engraved lines	1	-	1
horizontal engraved lines-curvilinear hatched scroll fill zone (Barkman Engraved)	1	-	1
horizontal engraved lines-vertical hatched triangle el.	1	-	1
horizontal engraved lines-tick marks (Barkman Engraved)	1	-	1
1+ horizontal engraved line with tick marks	-	7	7
2+ horizontal engraved lines, one with tick marks	1	1	2
2+ horizontal engraved lines with tick marks (Barkman Engraved)	-	3	3
horizontal-vertical engraved lines (with tick marks)- cross-hatched engraved zone with negative circle (Hodges Engraved)	1	-	1

Table 25. Grog-tempered decorated sherds and decorated elements in Zone F, cont.

Decorative method and element	Rim	Body	N
horizontal-diagonal engraved lines	-	2	2
horizontal-diagonal engraved lines-cross-hatched zone (Hodges Engraved)	1	-	1
horizontal engraved-hatched vertical columns	-	1	1
horizontal-vertical engraved lines	-	1	1
opposed curvilinear engraved lines	-	1	1
parallel engraved lines	-	6	6
closely-spaced parallel engraved lines	-	2	2
parallel engraved lines-excised triangle el.	-	1	1
parallel-straight engraved lines	-	1	1
engraved slanted scroll-hatched scroll fill zones (Barkman Engraved)	1	-	1
straight engraved line	-	7	7
vertical engraved lines	-	1	1
closely-spaced vertical engraved lines	-	1	1
vertical curvilinear engraved lines	-	3	3
interior engraved el.: vertical hatched triangle el. (Bowie Engraved)	1	-	1
<i>Engraved-Punctated</i>			
concentric circle el. and central excised dot (Belcher (Engraved)	-	1	1
concentric circle el. with central excised punctations- hatched bracket el. (Hatchel Engraved)	-	1	1
curvilinear vertical hatched zones-horizontal engraved line-excised punctated row (Simms Engraved)	-	1	1
diagonal opposed engraved lines-excised punctations	-	1	1
excised punctated rows (Belcher Engraved)	1	-	1
excised punctations above horizontal engraved line (Belcher Engraved)	4	1	5
horizontal hatched column and vertical excised punctated row above and horizontal excised punctated row below (Barkman Engraved)	-	1	1
horizontal engraved lines with excised punctated row between (Simms Engraved)	1	2	3
horizontal engraved lines with excised punctated rows between (Belcher Engraved)	3	-	3
horizontal engraved line and excised punctated row (Barkman Engraved)	-	2	2

Table 25. Grog-tempered decorated sherds and decorated elements in Zone F, cont.

Decorative method and element	Rim	Body	N
horizontal engraved lines-slanting scroll lines-excised punctated row (Barkman Engraved)	1	-	1
horizontal-vertical engraved lines and excised punctated row beneath horizontal lines	-	1	1
horizontal engraved lines with tick marks-excised punctated row between (Barkman Engraved)	-	2	2
horizontal engraved lines—one with tick marks—and excised punctated row between (Belcher Engraved)	2	-	2
horizontal engraved lines-one with tick marks-and excised punctated row below (Barkman Engraved)	2	-	2
<i>Engraved-Punctated-Appliqued (Belcher Engraved, var. Belcher)</i>			
horizontal-vertical engraved lines-excised punctated row below the lip-appliqued node	1	-	1
<i>Engraved-Red-Slipped</i>			
curvilinear engraved-curvilinear hatched zone-int./ext. red slipped (Avery Engraved)	-	1	1
closely-spaced diagonal engraved lines-int./ext. red-slipped	-	1	1
horizontal and vertical engraved lines-int./ext. red-slipped	1	-	1
horizontal-vertical-diagonal engraved lines-int./ext. red-slipped	-	1	1
<i>Red-Slipped</i>			
int. red-slipped	-	1	1
int./ext. red-slipped	1	15	16
<i>Trailed (Keno Trailed)</i>			
multiple curvilinear trailed lines	-	2	2
Totals	58	281	339

to rows of either fingernail or tool punctations (see Table 25). One out of place Early Caddo period grog-tempered Crockett Curvilinear Incised body sherd is also in Zone F (see Figure 74c); it has a triangular incised zone filled with rows of cane punctations. A grog-bone-tempered Crockett Curvilinear Incised body sherd is also in Zone F (see Figure 74d).

Grog-tempered Nash Neck Banded rim and body sherds account for 5.4 percent of the utility wares in Zone F, but there is only one fingernail punctated body sherd (0.5 percent) in the

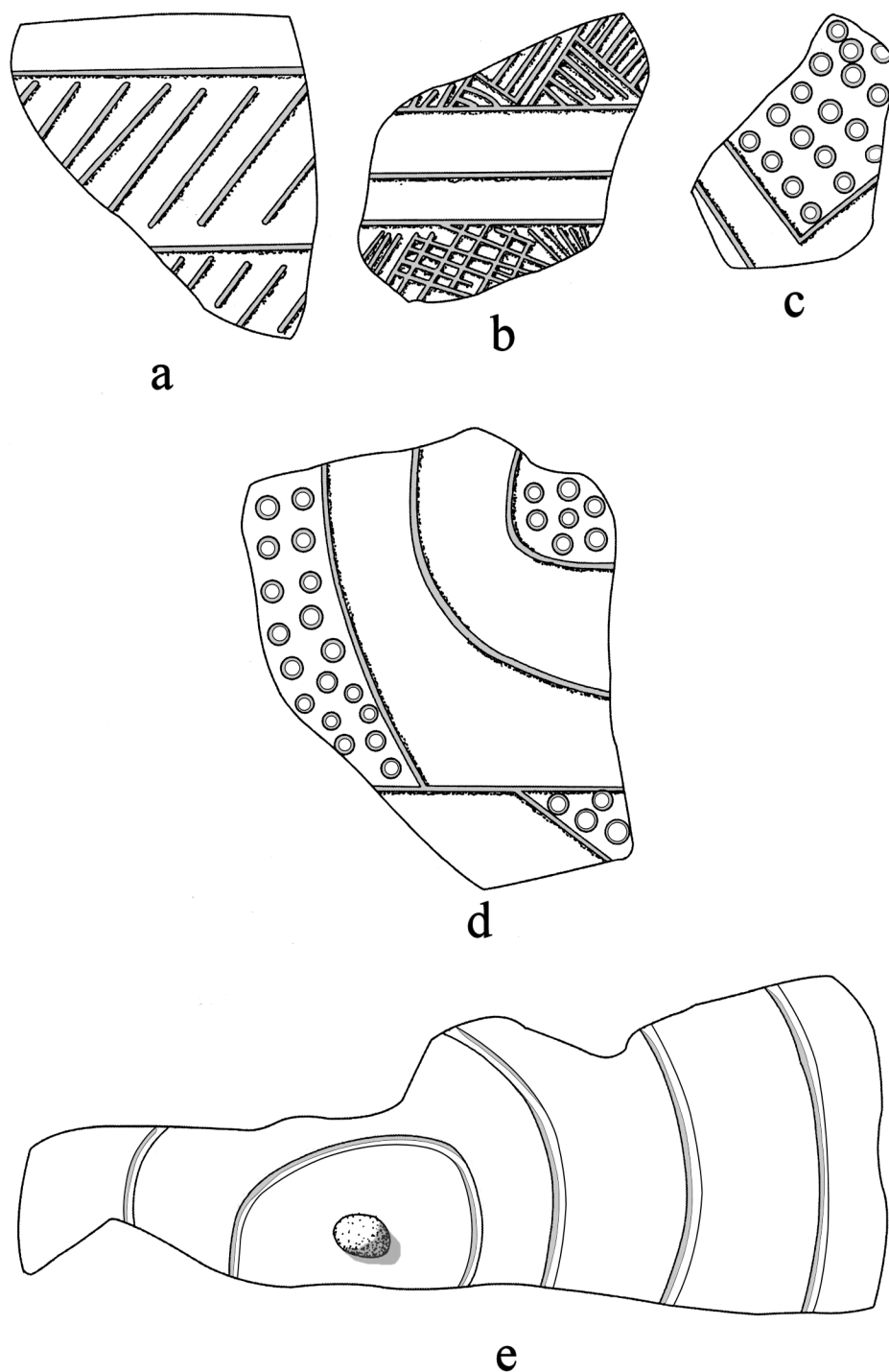


Figure 74. Selected decorative elements on grog- and grog-bone-tempered utility ware sherds from Zone F in the Hatchel site platform mound.

assemblage (see Table 25). Other Zone F grog-tempered utility wares include Belcher Ridged, *var. Bryam's Ferry* (0.5 percent), McKinney Plain (4.8 percent), including two sherds with a single horizontal incised line, and several Foster Trailed-Incised body sherds (3.9 percent). Among these is a

single Foster Trailed-Incised, *var. Foster* body sherd with concentric trailed circles around a central applied node (see Figure 74e).

The grog-tempered fine ware sherds in Zone F include those from vessels with engraved, engraved-punctated, engraved-red-slipped, red-slipped, and trailed vessels (see Table 25). Many of the engraved rim sherds have a series of horizontal lines as part of a decorative motif, sometimes with attached elements like vertical hatched triangles, cross-hatched zones, above scroll fill zones, or have tick marks (Figure 75e, while others have horizontal and diagonal engraved lines with a cross-hatched zone (Hodges Engraved), and slanted scrolls (Barkman Engraved, *var. Clear Lake*). One Bowie Engraved rim sherd (see Suhm and Jelks 1962:17) has a vertical hatched triangle element on the interior vessel surface. One of the more distinctive engraved rim sherds is from a Hodges Engraved vessel with horizontal-vertical engraved lines (with tick marks) as well as a cross-hatched engraved zone with a negative circle element (Figure 75a).

Rims from engraved-punctated vessels are primarily of the Belcher Engraved type (n=10, see Figure 75c), but there are also rim sherds from Simms Engraved (n=1), and Barkman Engraved (n=3, see Figure 75d) vessels. A number of the engraved-punctated sherds have tick marks on engraved lines, as did the engraved wares (see Table 25). One rim sherd is from a Belcher Engraved, *var. Belcher* vessel with horizontal and vertical engraved lines on the rim panel, an excised punctated row below the vessel lip, and a central applied node on the rim panel.

Among the grog-tempered fine wares in Zone F are engraved and engraved-punctated sherds from bottles. Among these are body sherds with multiple curvilinear lines from Bailey Engraved or Taylor Engraved vessels, an engraved-excised punctated Belcher Engraved, *var. Ogden* vessel (see Figure 75b), and a Hatchel Engraved bottle sherd with concentric circles, central excised punctations, and a hatched bracket element (see Figure 75f).

About 3 percent of the fine ware sherds are from vessels with engraved decorations on vessels with interior and exterior red-slipped surfaces (see Table 25). At least one of these sherds is from an Avery Engraved vessel. Another 11.9 percent of the fine wares have only a red slip on one or both vessel surfaces. These sherds are from vessels that only have a red slip—based on the one otherwise undecorated slipped rim sherd—as well as from the otherwise undecorated portions of engraved fine wares.

There are only two Keno Trailed body sherds (1.5 percent of the grog-tempered fine wares) in the Zone F grog-tempered decorated sherds (see Table 25). Both sherds have multiple curvilinear trailed lines.

About 59 percent of the grog-bone-tempered decorated sherds from Zone F are from utility ware vessels (Table 26), particularly sherds from Karnack Brushed-Incised vessels with brushed and brushed-incised marks and lines on the vessel body. Other grog-bone-tempered utility wares in this zone have applied, incised, trailed, and trailed-incised decorative elements; these are from Foster Trailed-Incised, *var. unspecified* and *var. Dobson* vessels.

One grog-bone-tempered sherd in Zone F is from a pre-A.D. 1200 Crockett Curvilinear Incised body sherd with curvilinear incised lines and curvilinear, circular, and triangular incised zones filled with cane punctations (see Figure 74d and Table 26). This sherd must have been collected from non-mound village areas and deposited as fill in Zone F of the platform mound as it was being constructed.

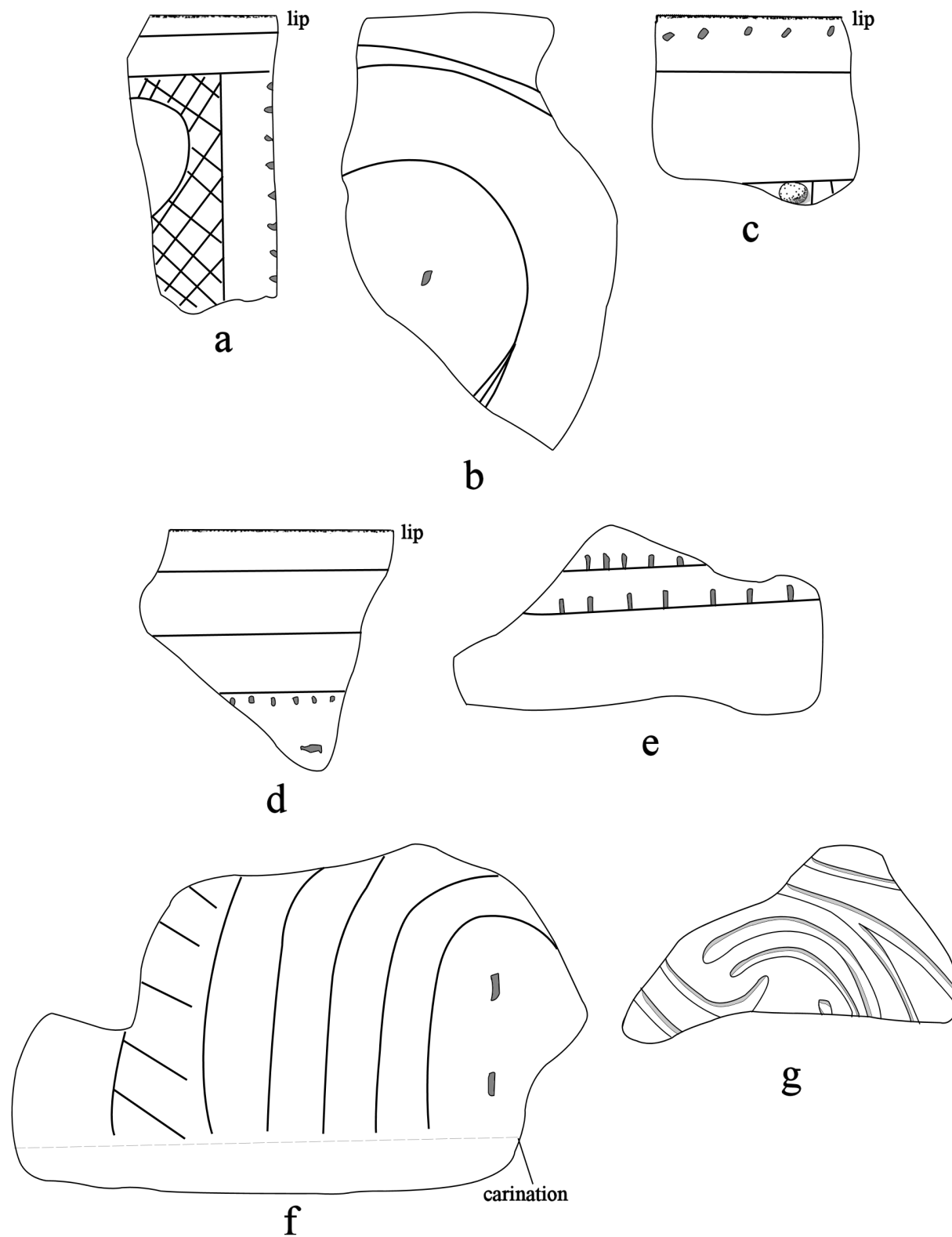


Figure 75. Selected decorative elements on grog-tempered fine ware sherds from Zone F in the Hatchel site platform mound.

Table 26. Grog-bone-tempered decorated sherds and decorated elements in Zone F.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Appliqued</i>			
straight appliqued ridge	-	2	2
<i>Brushed</i>			
opposed brushed marks	-	1	1
parallel brushed marks	-	5	5
<i>Brushed-Incised</i>			
parallel brushed-incised marks and lines	-	4	4
<i>Incised</i>			
horizontal incised lines-lip notched	1	-	1
parallel incised lines	-	2	2
<i>Incised-Punctated</i>			
curvilinear incised lines and curvilinear, circular, and triangular zones filled with cane punctations (Crockett Curvilinear Incised)	-	1	1
<i>Trailed (Foster Trailed-Incised)</i>			
multiple curvilinear trailed lines	-	2	2
<i>Trailed-Incised (Foster Trailed-Incised)</i>			
curvilinear incised lines-horizontal trailed line	1	-	1
Fine Ware			
<i>Engraved</i>			
diagonal opposed engraved lines	-	1	1
1+ horizontal engraved line	1	2	3
2+ horizontal engraved lines	1	1	2
1+ horizontal engraved line with tick marks (Simms Engraved)	1	1	2
opposed engraved lines	-	1	1
<i>Engraved-Punctated</i>			
horizontal engraved lines above excised punctated row	-	1	1
horizontal engraved line below excised punctated row (Belcher Engraved)	1	-	1

Table 26. Grog-bone-tempered decorated sherds and decorated elements in Zone F, cont.

Decorative method and element	Rim	Body	N
<i>Red-Slipped</i>			
int./ext. red-slipped	-	1	1
<i>Trailed (Keno Trailed)</i>			
multiple curvilinear trailed lines that end in hooked arms	-	1	1
Totals	6	26	32

The grog-bone-tempered fine ware sherds in Zone F are from vessels with engraved, engraved-punctated, red-slipped, and trailed decorative elements (see Table 26). Among these sherds are rim and/or body sherds from Belcher Engraved (n=1) and Simms Engraved (n=2) vessels and a possible Keno Trailed, *var. McClendon* body sherd with multiple curvilinear trailed lines that end in hooked arms (see Figure 75g).

About 58 percent of the bone-tempered decorated sherds in Zone F are from brushed utility ware vessels (Table 27), including rim and body sherds with brushed, brushed-appliqued, and brushed-incised decorative elements. These are likely from Karnack Brushed-Incised and Pease Brushed-Incised vessels. The fine ware sherds are from a red-slipped Simms Engraved vessel as well as body sherds with either an interior red-slipped or interior-exterior red-slipped surfaces. These latter sherds may be from the undecorated portions of a red-slipped engraved vessel or from slipped bone-tempered sherds from an otherwise undecorated vessel.

About 56 percent of the decorated shell-tempered sherds in Zone F are from fine ware vessels (Table 28). Most of these sherds (73 percent of the shell-tempered fine wares) are from Clement Redware vessels, including two rim sherds, with red-slipped interior and exterior vessel surfaces. Three of the other shell-tempered fine ware sherds have red-slipped surfaces and widely-spaced horizontal engraved lines, and are probably from Avery Engraved compound bowls, while the other is a rim from a Simms Engraved vessel.

Among the shell-tempered utility wares in Zone F are two body sherds with appliqued ridges (see Table 28), likely either from McKinney Appliqued, Nash Neck Banded, or Emory Punctated-Incised vessels. Several other body sherds are probably from shell-tempered Karnack Brushed-Incised jars, and there is one body or lower rim sherd from a Nash Neck Banded jar. Another body sherd has rows of tool punctations. Two body sherds are from Foster Trailed-Incised, *var. unspecified* vessels with curvilinear trailed lines on the vessel body. The last shell-tempered utility ware sherd is a body sherd from a Mound Tract Incised and Brushed vessel with multiple curvilinear trailed lines and a curvilinear brushed zone. Kelley (1997:52) notes a few sherds of this type at the McClelland site (16BO236) in ca. A.D. 1650-1710 contexts, as well as sherds from earlier Belcher phase contexts at other Red River valley sites in Northwest Louisiana.

Table 27. Bone-tempered decorated sherds and decorated elements in Zone F.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Brushed</i>			
horizontal brushed marks	1	-	1
parallel brushed marks	-	1	1
vertical brushed marks	1	-	1
<i>Brushed-Appliqued</i>			
parallel brushed marks-parallel appliqued ridges (Pease Brushed-Incised)	-	3	3
<i>Brushed-Incised</i>			
diagonal brushed-incised marks and line	-	1	1
Fine Ware			
<i>Engraved-Red-Slipped</i>			
horizontal engraved line-sets of vertical engraved lines (Simms Engraved)	-	1	1
<i>Red-Slipped</i>			
int. red-slipped	-	2	2
int./ext. red-slipped	-	2	2
Totals	2	10	12

Table 28. Shell-tempered decorated sherds and decorated elements in Zone F.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Appliqued</i>			
straight appliqued ridge	-	1	1
<i>Appliqued-Punctated</i>			
parallel appliqued ridge and 1+ tool punctated row	-	1	1

Table 28. Shell-tempered decorated sherds and decorated elements in Zone F, cont.

Decorative method and element	Rim	Body	N
<i>Brushed (Karnack Brushed-Incised)</i>			
parallel brushed marks	-	3	3
<i>Brushed-Appliqued</i>			
parallel brushed-straight appliqued fillet	-	1	1
<i>Brushed-Incised (Karnack Brushed-Incised)</i>			
parallel brushed-incised marks and lines	-	1	1
<i>Neck Banded (Nash Neck Banded)</i>			
horizontal neck banded rows	-	1	1
<i>Punctated</i>			
tool punctated rows	-	1	1
<i>Trailed (Foster Trailed-Incised)</i>			
curvilinear trailed lines	-	2	2
<i>Trailed-Brushed (Mound Tract Incised and Brushed)</i>			
multiple curvilinear trailed lines and curvilinear brushed zone	-	1	1
Fine Ware			
<i>Engraved</i>			
horizontal engraved line-set of vertical engraved lines (Simms Engraved)	1	-	1
<i>Engraved-Red-Slipped</i>			
1-2+ widely-spaced horizontal engraved lines-int./ext. red-slipped	-	3	3
<i>Red-Slipped</i>			
int./ext. red-slipped	2	9	11
Totals	3	24	27

Zone G Decorated Sherd Elements

The one structure in Zone G, Feature 22, was built directly over Structure 18 in Zone H, and is situated in the center of the mound platform (Figure 76); it lies about 30 cm below Zone F (Beatty 1939:264). The structure has two arcs, and sometimes three arcs (on the western side of

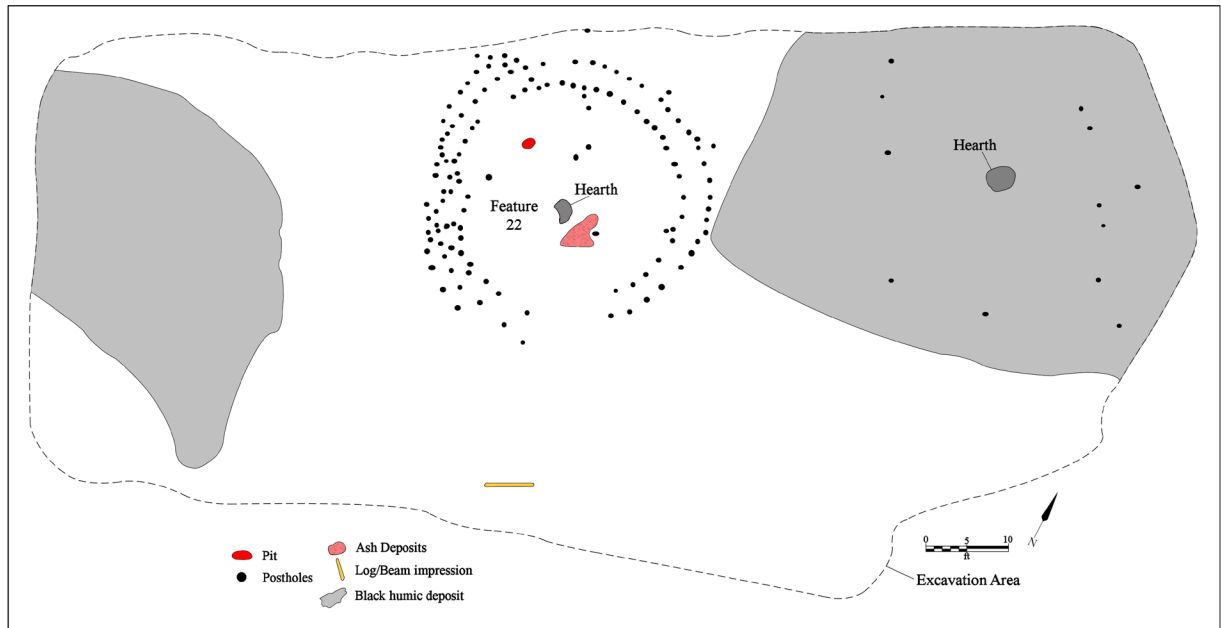


Figure 76. Plan map of Zone G structure and other features in the Hatchel platform mound.

the structure), of post holes, suggesting it had double walls of posts. The double walls are 8.53 and 10.22 m in diameter. The structure has a central hearth and associated ash deposits, as well as a small pit in the northwestern quadrant.

There are large areas of apparent midden deposits covering much of Zone G outside of Feature 22, and most of the sherds come from these deposits, not Feature 22; the remainder of the zone was a light red clay that Feature 22 was built upon or a brown sandy loam in proximity to the western black humic deposit (Beatty 1939:264, 273). The easternmost such area has a single large hearth and two widely-spaced linear rows of scattered post holes around a hearth (about 15 cm in depth), suggesting there may have been a rectangular platform constructed in Zone G on the eastern side of the platform mound.

In Zone G, about 42 percent of the decorated grog-tempered sherds ($n=251$) are from utility ware vessels. Vessel sherds with incised (19.5 percent), applied (15.9 percent), brushed (15.5 percent), and brushed-applied (7.6 percent) decorative elements are most common in this zone (Table 29).

The grog-tempered incised rim sherds have diagonal and horizontal-diagonal incised lines, sets of short diagonal incised lines from a Foster Trilled-Incised, *var.* *Foster* vessel (Figure 77a), as well as horizontal incised lines (see Table 29). Body sherds have curvilinear, diagonal, horizontal, opposed, parallel, and vertical incised lines, along with one body sherd with diagonal opposed and horizontal incised lines from a Pease Brushed-Incised vessel (Figure 77c).

One applied rim sherd from Zone G has vertical applied ridges, and may be from a Cass Applied vessel (see Suhm and Jelks 1962:Plate 13). Body sherds have applied nodes and applied ridges; these sherds have parallel, straight, and curvilinear orientations. These applied sherds are likely from McKinney Applied and Nash Neck Banded jars. There are also a few sherds

Table 29. Grog-tempered decorated sherds and decorated elements in Zone G.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Appliqued</i>			
appliqued node	-	1	1
linear appliqued node	-	1	1
parallel appliqued ridges	-	1	1
parallel curvilinear appliqued ridges	-	1	1
parallel-vertical appliqued ridges	-	1	1
straight appliqued ridge	-	32	32
vertical appliqued ridges	1	2	3
<i>Appliqued-Incised</i>			
parallel appliqued ridges-parallel incised lines between ridges	-	1	1
parallel appliqued ridges-straight incised line between ridges	-	1	1
straight appliqued ridge-straight incised line	-	2	2
vertical appliqued ridge-horizontal incised line at rim-body juncture	-	1	1
<i>Appliqued-Incised-Punctated</i>			
diagonal appliqued ridge-diagonal-horizontal incised lines- tool punctated rows	-	1	1
<i>Appliqued-Punctated</i>			
opposed tool punctated row-straight appliqued ridge	-	1	1
vertical appliqued ridge and vertical linear tool punctated row	1	-	1
<i>Brushed</i>			
diagonal brushed marks	2	-	2
horizontal brushed marks	3	-	3
opposed brushed marks	-	2	2
overlapping brushed marks	-	2	2
parallel brushed marks	-	23	23
vertical brushed marks	1	6	7
<i>Brushed-Appliqued</i>			
horizontal brushed-appliqued node	1	-	1
opposed brushed-straight appliqued ridge	-	2	2
parallel brushed-straight appliqued fillet	-	1	1
parallel brushed-straight appliqued ridge (Pease Brushed-Incised)	-	10	10
parallel brushed marks between parallel appliqued ridges (Pease Brushed-Incised)	-	4	4

Table 29. Grog-tempered decorated sherds and decorated elements in Zone G, cont.

Decorative method and element	Rim	Body	N
parallel brushed between vertical applied ridges (Pease Brushed-Incised)	-	1	1
<i>Brushed-Appliqued-Punctated</i>			
straight applied ridge-parallel brushed marks-tool punctations through brushing (Pease Brushed-Incised)	-	1	1
<i>Brushed-Incised</i>			
curvilinear incised lines-curvilinear brushed zone	-	1	1
horizontal brushed-incised marks and lines	1	-	1
horizontal incised line-diagonal brushed-incised marks and lines	1	-	1
opposed brushed marks-overlying parallel incised lines	-	1	1
parallel brushed-incised marks and lines	-	7	7
<i>Brushed-Lip Notched</i>			
horizontal brushed marks-lip notched	1	-	1
<i>Incised</i>			
curvilinear incised lines	-	1	1
diagonal incised lines	1	2	3
sets of short diagonal incised lines (Foster Trilled-Incised)	1	2	3
diagonal opposed-horizontal incised lines	-	1	1
diagonal opposed-horizontal incised lines (Pease Brushed-Incised)	-	1	1
horizontal-diagonal engraved lines	1	-	1
1+ horizontal incised line	-	1	1
2+ horizontal incised lines	3	-	3
6+ horizontal incised lines	1	-	1
horizontal incised lines, closely-spaced	1	-	1
opposed incised lines	-	1	1
closely-spaced parallel incised lines	-	2	2
parallel incised lines	-	20	20
straight incised line	-	9	9
vertical incised lines	-	1	1
<i>Incised-Punctated</i>			
circular incised zone filled with tool punctations	-	1	1
diagonal hatched zone below rows of small circular punctations	1	-	1
diagonal incised line-tool punctated row	-	1	1

Table 29. Grog-tempered decorated sherds and decorated elements in Zone G, cont.

Decorative method and element	Rim	Body	N
diagonal opposed incised lines divided by tool punctated rows (Sanson Incised)	-	1	1
horizontal incised lines on either side of fingernail punctated row	-	1	1
horizontal incised line at rim-body juncture-tool punctated row at top of vessel body	-	1	1
horizontal incised lines above linear tool punctated row	1	-	1
2+ sets of horizontal incised zones with tool punctations between zones	1	-	1
horizontal-vertical incised lines-zones with tool punctations	-	1	1
incised zone filled with circular punctations-incised zone filled with diagonal hatched lines	-	1	1
rectilinear incised zone filled with closely-spaced tool punctated rows	-	1	1
straight incised line-row of fingernail punctations	-	1	1
straight incised line-rows of tool punctations	-	1	1
tool punctated row under the lip-vertical incised column filled with rows of linear tool punctations	1	-	1
vertical incised lines-fingernail punctated row	-	1	1
<i>Neck Banded (Nash Neck Banded)</i>			
horizontal neck bands	7	13	20
<i>Punctated</i>			
fingernail punctated row/rows	2	1	3
linear tool punctated rows	1	-	1
tool punctated row below the lip	1	-	1
tool punctated row/rows	-	4	4
<i>Ridged-Brushed (Belcher Ridged)</i>			
parallel ridged-parallel brushed	-	5	5
<i>Ridged-Incised (Belcher Ridged)</i>			
parallel ridged-parallel incised lines	-	2	2
<i>Roughened (McKinney Plain)</i>			
roughened surface	6	5	11
<i>Trailed (Foster Trailed-Incised)</i>			
curvilinear trailed lines, multiple	-	7	7
1+ horizontal trailed line	1	1	2

Table 29. Grog-tempered decorated sherds and decorated elements in Zone G, cont.

Decorative method and element	Rim	Body	N
opposed trailed lines	-	1	1
opposed curvilinear trailed lines	-	5	5
parallel trailed lines	-	3	3
<i>Trailed-Appliqued (Foster Trailed-Incised)</i>			
opposed diagonal-curvilinear trailed lines and vertical appliqued fillet	-	1	1
<i>Trailed-Incised (Foster Trailed-Incised)</i>			
3+ sets of short diagonal incised lines-horizontal trailed lines between 2 sets	-	1	1
<i>Trailed-Punctated (Foster Trailed-Incised)</i>			
opposed curvilinear trailed lines-curvilinear zone filled with tool punctations	-	1	1
Fine Ware			
<i>Engraved</i>			
circular el. and diagonal engraved line	-	1	1
circular and vertical curvilinear panels and zones (Hatchel Engraved)	-	3	3
cross-hatched engraved zone	-	4	4
curvilinear engraved line	-	7	7
curvilinear engraved lines, multiple (Taylor Engraved)	-	16	16
curvilinear engraved lines and circle el.	-	1	1
curvilinear engraved lines and excised triangle el.	-	1	1
curvilinear engraved lines and hatched zone	-	2	2
curvilinear engraved lines and hatched triangle el.	-	1	1
curvilinear engraved lines and open pendant triangle el.	-	1	1
curvilinear excised zone	-	1	1
curvilinear hatched zone	-	3	3
curvilinear hatched triangle el.	-	1	1
curvilinear opposed engraved lines (Taylor Engraved)	-	2	2
curvilinear opposed engraved lines and hatched lines	-	1	1
curvilinear opposed engraved lines and hatched triangle el.	-	1	1
curvilinear and diagonal engraved lines	-	1	1
curvilinear-horizontal engraved lines, multiple	-	1	1
curvilinear-vertical engraved lines in panel or zone (Hatchel Engraved)	-	3	3
diagonal engraved lines	-	5	5

Table 29. Grog-tempered decorated sherds and decorated elements in Zone G, cont.

Decorative method and element	Rim	Body	N
diagonal opposed engraved lines	-	1	1
hatched bracket el.	-	1	1
horizontal hatched zone	-	1	1
narrow hatched and excised zone	-	1	1
1+ horizontal engraved line	14	22	36
2-3+ horizontal engraved lines	22	5	27
4+ horizontal engraved lines	-	1	1
5+ horizontal engraved lines	1	-	1
horizontal engraved line-cross-hatched bracket el.	-	1	1
horizontal engraved lines-cross-hatched zone	1	-	1
horizontal-curvilinear engraved lines-hatched triangle el.	-	1	1
horizontal engraved lines-triangle-shaped cross-hatched zone	-	1	1
horizontal engraved lines-rectilinear cross-hatched zone (Barkman Engraved)	1	-	1
horizontal engraved lines-narrow horizontal hatched zone	2	1	3
horizontal engraved lines-narrow horizontal hatched zones	-	1	1
horizontal engraved lines-hatched triangle el.	1	-	1
2+ horizontal engraved lines and horizontal excised zone	1	-	1
horizontal-diagonal engraved lines	4	5	9
horizontal engraved lines-diagonal excised lines	1	-	1
7+ horizontal engraved lines and hatched triangle el. atop uppermost line	1	-	1
horizontal-diagonal engraved lines-circle el.	-	1	1
horizontal engraved lines-diagonal-vertical engraved lines	-	1	1
horizontal engraved zone with diagonal opposed lines and negative oval el. (Simms Engraved)	-	1	1
horizontal excised zone	-	1	1
horizontal engraved lines-vertical hatched columns (Barkman Engraved)	1	-	1
horizontal-vertical engraved lines	1	2	3
horizontal-vertical engraved lines-excised bracket el.	1	-	1
horizontal-vertical engraved lines-small circle el.	1	-	1
horizontal-vertical engraved lines-diagonal hatched column (Simms Engraved)	1	-	1
horizontal engraved lines (upper panel)-vertical and vertical curvilinear engraved lines (lower panel)	-	1	1
horizontal-vertical curvilinear engraved lines	1	1	2
horizontal engraved line-short vertical hatched lines	-	1	1

Table 29. Grog-tempered decorated sherds and decorated elements in Zone G, cont.

Decorative method and element	Rim	Body	N
opposed engraved lines	-	1	1
opposed engraved lines and excised triangle el.	-	1	1
parallel engraved lines	-	10	10
parallel and diagonal engraved lines	-	1	1
parallel engraved lines-narrow excised zone	-	2	2
straight engraved line	-	8	8
straight engraved line and narrow hatched zone	-	2	2
triangle hatched el.	-	1	1
vertical engraved lines	-	1	1
vertical engraved lines-cross-hatched zone-rectilinear hatched zone (Barkman Engraved)	-	1	1
vertical hatched zone	-	1	1
vertical hatched column, int. vessel surface	1	-	1
diagonal tick marks	-	1	1
horizontal engraved lines-2 lines with tick marks	1	-	1
horizontal engraved lines-circle el. with tick marks	1	-	1
1+ horizontal engraved line-row of tick marks	-	2	2
2+ horizontal engraved lines with tick marks	1	2	3
4+ horizontal engraved lines-tick marks (Barkman Engraved)	-	1	1
horizontal engraved line with tick marks-curvilinear zones with diagonal opposed engraved lines (Hodges Engraved)	-	1	1
horizontal-diagonal engraved lines with diagonal tick marks (Means Engraved)	-	1	1
horizontal-diagonal engraved lines-cross-hatched zone-horizontal engraved line with tick marks (Hodges Engraved)	-	1	1
horizontal engraved line with tick marks-set of vertical engraved lines (Simms Engraved)	-	1	1
horizontal-vertical engraved lines-excised tick mark	1	-	1
opposed engraved lines with tick marks	-	1	1
row of excised tick marks	-	1	1
straight engraved line with tick marks	-	2	2
curvilinear hatched scroll fill zone	1	-	1
horizontal engraved line-horizontal scroll line-hatched triangle el.	-	1	1
horizontal engraved lines-horizontal scroll line with excised bracket el.-excised scroll fill zone	1	-	1
horizontal engraved lines-horizontal and vertical scroll lines	-	1	1
horizontal engraved lines-vertical curvilinear lines-hatched bracket el.-sets of vertical lines in scroll fill zone	1	-	1

Table 29. Grog-tempered decorated sherds and decorated elements in Zone G, cont.

Decorative method and element	Rim	Body	N
slanted scroll line and cross-hatched scroll fill zone (Barkman Engraved)	1	-	1
slanted scroll line with hatched bracket el. (Barkman Engraved)	-	1	1
slanted scroll line with curvilinear-vertical hatched scroll fill zone (Barkman Engraved)	-	2	2
slanted scroll line-excised triangular scroll fill zone	-	1	1
slanted scroll line with vertical hatched scroll fill zones (Barkman Engraved)	1	2	3
slanted scroll line with vertical hatched scroll fill zones- vertical hatched column and set of vertical curvilinear lines (Barkman Engraved)	1	-	1
slanted scroll line-horizontal and curvilinear lines-hatched triangle el. (Barkman Engraved)	-	1	1
slanted scroll line and ticked scroll fill zone (Barkman Engraved)	1	-	1
triangular excised scroll fill zone	1	-	1
<i>Engraved-Appliqued (Hatchel Engraved)</i>			
opposed curvilinear engraved lines-appliqued ridge	-	1	1
<i>Engraved-Punctated</i>			
curvilinear engraved lines-triangular excised punctated zone	1	-	1
diagonal line-triangle el.-curvilinear hatched zone-vertical excised punctated row	-	1	1
horizontal-curvilinear engraved lines-circular row of excised punctations (Barkman Engraved)	-	1	1
horizontal engraved lines-excised dashed punctations between the lines	-	2	2
horizontal engraved lines with excised punctated row between (Simms Engraved)	6	4	10
horizontal engraved lines and excised punctated row under the lip and above the engraved lines (Belcher Engraved)	8	-	8
horizontal engraved line between excised punctated rows (Belcher Engraved)	-	1	1
horizontal-curvilinear engraved zone with excised punctations	-	1	1
horizontal-diagonal engraved lines above 2 rows of excised punctations (Belcher Engraved)	-	3	3
horizontal-diagonal engraved lines-excised punctated rows- set of vertical engraved lines (lower panel)-excised punctated row above horizontal engraved line (upper panel) (Belcher Engraved)	2	-	2

Table 29. Grog-tempered decorated sherds and decorated elements in Zone G, cont.

Decorative method and element	Rim	Body	N
horizontal engraved lines-cross-hatched bracket el.-excised punctated row between engraved lines	1	-	1
horizontal-vertical engraved lines-excised punctated row between horizontal lines (Simms Engraved)	1	1	2
horizontal-vertical engraved lines above excised punctated row (Barkman Engraved)	-	1	1
horizontal engraved-vertical hatched columns-vertical row of excised punctations (Barkman Engraved)	-	1	1
horizontal-vertical engraved lines-cross-hatched bracket el.-excised punctated row between horizontal lines (Simms Engraved)	1	-	1
rectilinear engraved lines and row of dashed excised punctations (Barkman Engraved)	-	1	1
rectilinear excised zones-excised and dashed excised punctations (Barkman Engraved)	-	1	1
straight engraved line-row of excised punctations	-	1	1
vertical engraved lines-excised dash punctations	-	1	1
vertical engraved lines-curvilinear engraved line-curvilinear row of excised punctations (Barkman Engraved)	-	1	1
vertical engraved line-curvilinear hatched triangle el.-row of excised punctations	-	1	1
vertical engraved lines-hatched narrow horizontal zones-excised punctated row between zones (Barkman Engraved)	1	-	1
curvilinear engraved lines—one with tick marks-with excised dashed punctations between (Simms Engraved)	-	1	1
horizontal engraved zone with diagonal engraved lines-tick marks-excised pendant triangle-excised punctated row above engraved zone	-	1	1
horizontal engraved lines with excised punctated row between-one horizontal line with tick marks (Belcher Engraved)	1	-	1
horizontal engraved line with tick mark-horizontal excised punctated row mid-panel	1	1	2
horizontal engraved lines with tick marks-excised punctated row between engraved lines (Barkman Engraved)	-	2	2
horizontal engraved lines, one with tick marks-excised punctated row between engraved lines (Barkman Engraved)	1	-	1
horizontal-diagonal engraved lines-tick marks on diagonal line- excised punctated row above carination (Belcher Engraved)	-	1	1
parallel engraved lines with tick marks-excised punctated row between engraved lines (Barkman Engraved)	-	1	1

Table 29. Grog-tempered decorated sherds and decorated elements in Zone G, cont.

Decorative method and element	Rim	Body	N
rectilinear engraved zone with excised punctations-horizontal and vertical engraved lines with tick marks (Barkman Engraved)	-	1	1
vertical curvilinear hatched scroll fill zone with excised punctations-horizontal engraved lines	-	1	1
<i>Engraved-Punctated-Appliqued (Belcher Engraved, var. Belcher)</i>			
semi-circular engraved lines with excised punctations between the lines-appliqued node-horizontal row of excised punctations below horizontal engraved line	-	1	1
horizontal engraved line-semi-circular engraved lines around appliqued node-zones of excised punctations	-	1	1
horizontal-diagonal engraved lines with excised punctated rows above and below-diagonal opposed engraved lines on either side of appliqued node	-	1	1
<i>Engraved-Punctated-Red-Slipped</i>			
narrow curvilinear hatched zone-excised punctated row-int./ ext. red-slipped	-	1	1
<i>Engraved-Red-Slipped</i>			
curvilinear engraved line-ext. red-slipped	-	1	1
1+ horizontal engraved line-int./ext. red-slipped	1	1	2
1-2+ widely-spaced horizontal engraved lines-int./ext. red-slipped	2	2	4
closely-spaced parallel engraved lines-int./ext. red-slipped	-	1	1
semi-circular engraved line-int./ext. red-slipped (Avery Engraved)	-	1	1
<i>Red-Slipped</i>			
ext. red-slipped	-	1	1
int. red-slipped	-	2	2
int./ext. red-slipped	2	39	41
<i>Trailed (Keno Trailed)</i>			
circular and curvilinear trailed lines	-	1	1
curvilinear trailed lines	-	2	2
multiple curvilinear trailed lines	-	8	8
multiple curvilinear trailed lines that end in hooked arm el.	-	1	1
multiple opposed curvilinear trailed lines	-	1	1
horizontal and diagonal trailed lines	-	1	1
Totals	96	509	605

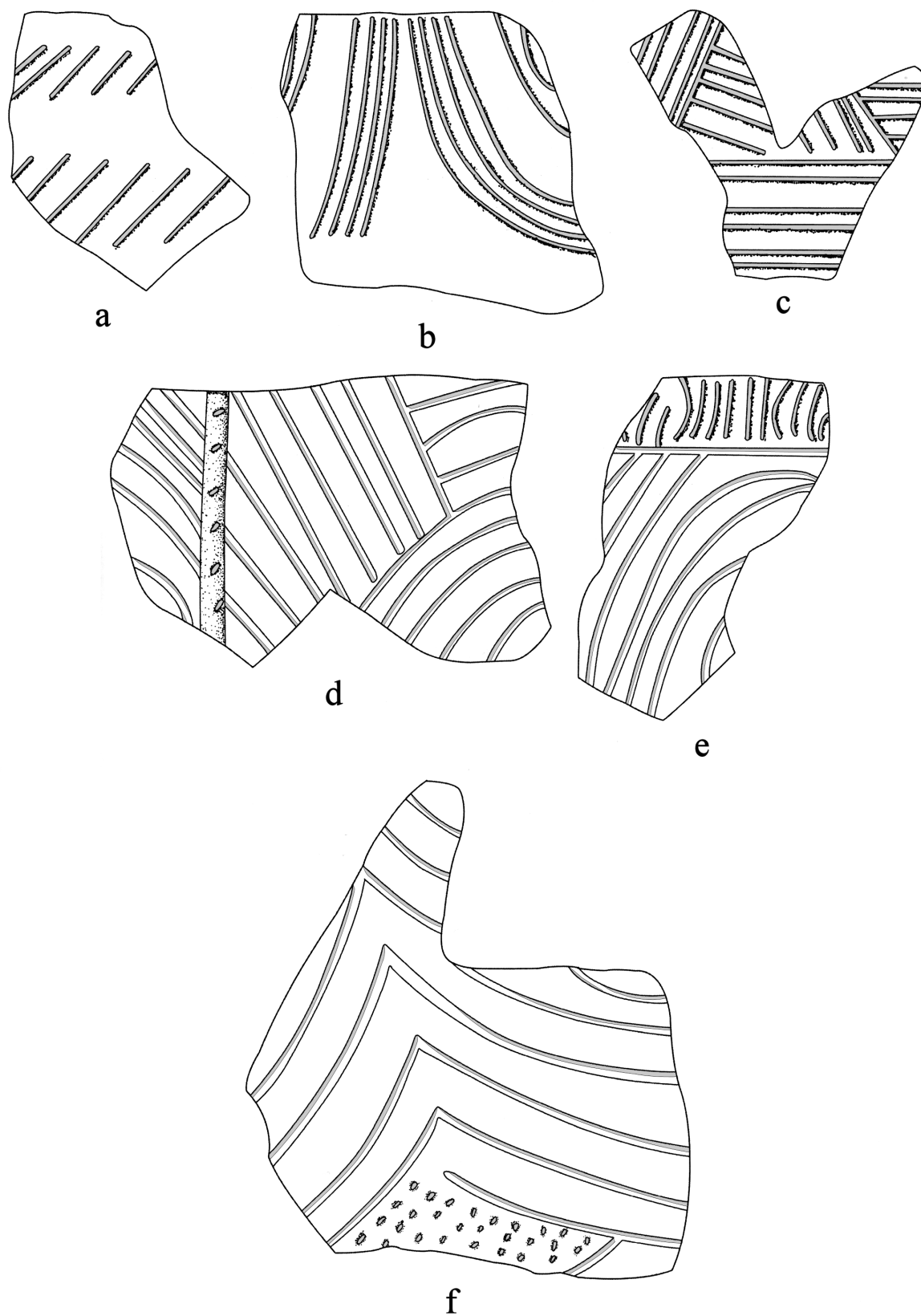


Figure 77. Selected utility ware grog-tempered sherds from Zone G in the Hatchel platform mound.

with applied-incised ($n=6$), applied-incised-punctated ($n=1$), and applied-punctated ($n=2$) elements (see Table 29). Brushed grog-tempered vessels in Zone G have diagonal, horizontal, and vertical brushing marks on the rim, and most of the body sherds have parallel brushing marks. These sherds are from Karnack Brushed-Incised jars, as are the brushed-incised rim and body sherds. One horizontal brushed rim in Zone G has a notched lip. Many of the grog-tempered brushed-applied body sherds are from Pease Brushed-Incised vessels with applied ridges between panels filled with brushing marks, as is one Pease Brushed-Incised body sherd with a straight applied ridge, parallel brushing marks, and tool punctations pressed through the brushing (see Table 29).

The grog-tempered incised-punctated rim sherds in Zone G include a rim with a diagonal hatched zone below rows of small circular punctations below the lip (Figure 78d), horizontal incised lines above a linear tool punctated row, another with at least two sets of horizontal incised zones with tool punctations between the zones, and a rim with a vertical incised column filled with rows of

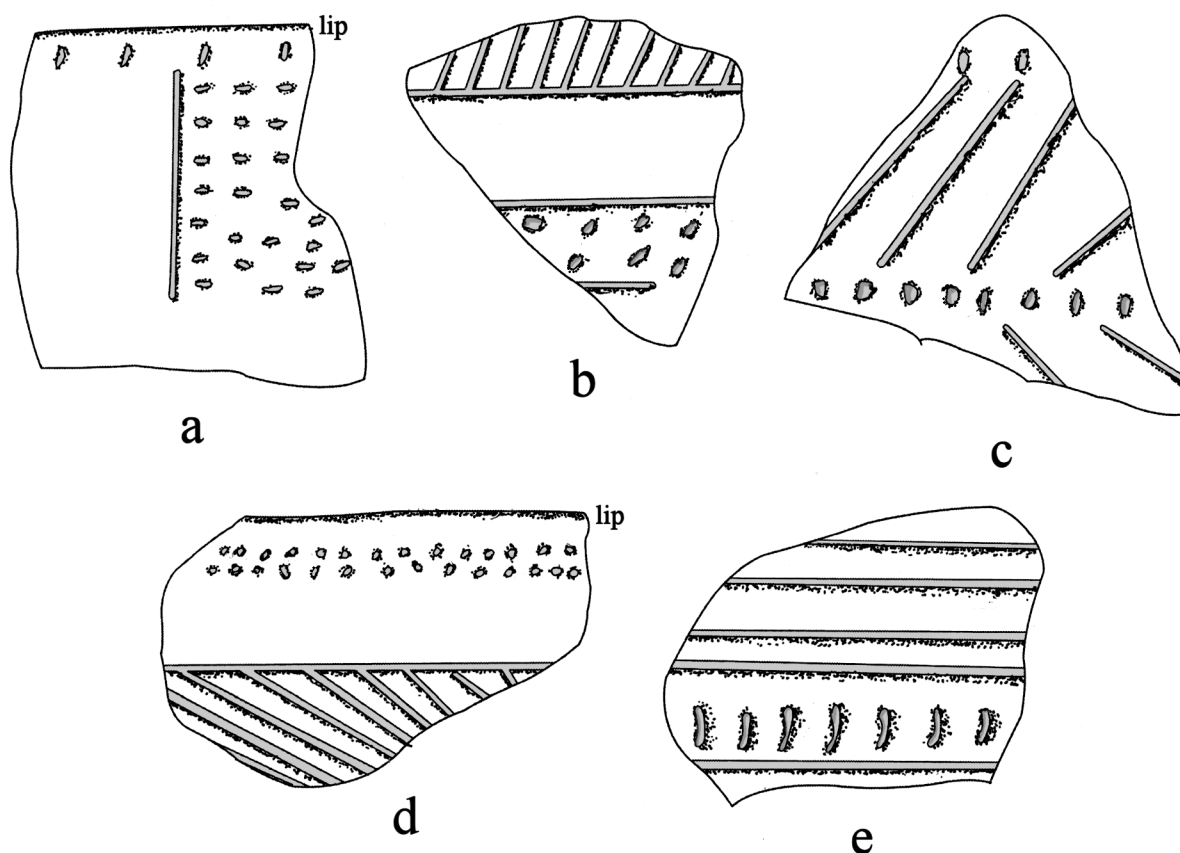


Figure 78. Grog-tempered incised-punctated rim and body sherds in Zone G.

linear tool punctations and a row of tool punctations under the vessel lip (Figure 78a). Body sherds include incised zones with tool or fingernail punctations (Figure 78b, d) as well as hatched incised zones. One body sherd is from a Sanson Incised vessel (Figure 78c). Other Sanson Incised sherds, a Plaquemine culture utility ware, have been identified in Zones B and E in the platform mound.

Sherds with punctated elements ($n=9$, 3.6 percent) include rim sherds with rows of either fingernail or tool punctations (see Table 29). Body sherds also have rows of fingernail or tool punctations.

Also in the grog-tempered utility wares from Zone G are Nash Neck Banded rim and body sherds (n=20, 8.0 percent of the utility wares), Belcher Ridged body sherds (n=7, 2.8 percent), and McKinney Plain rim and body sherds (n=11, 4.4 percent). More than 8.3 percent of the grog-tempered utility wares are from Foster Trailed-Incised vessels, including one *var. Dobson* body sherd with sets of short diagonal incised lines divided by horizontal trailed lines (see Table 29). Other Foster Trailed-Incised, *var. unspecified* sherds in Zone G include one with opposed diagonal and curvilinear trailed lines overlain by a vertical applied fillet (see Figure 77d) and others with opposed curvilinear trailed lines and a nested curvilinear zone filled with small tool punctations (see Figure 77f).

The Zone G grog-tempered fine wares sherds have engraved (n=226, 64 percent), engraved-appliqued (n=1, 0.3 percent), engraved-punctated (n=55, 15.5 percent), engraved-punctated-appliqued (n=3, 0.9 percent), engraved-punctated-appliqued (n=1, 0.3 percent), engraved-punctated-red-slipped (n=1, 0.3 percent), engraved-red-slipped (n=9, 2.5 percent), red-slipped (n=44, 12.4 percent), and trailed (n=14, 4.0 percent) decorative elements. Sherds from Barkman Engraved (Figures 79a, 80c-d, f, 81a, and 82c, e, n=26), Belcher Engraved (Figures 81b, 82a-b, d, n=19), Taylor Engraved (n=18, Figure 80a), Simms Engraved (Figures 79b, 81c, n=17), and Hatchel Engraved (Figure 79c, n=7) are most common in Zone G. There are two sherds from Hodges Engraved vessels (see Table 29).

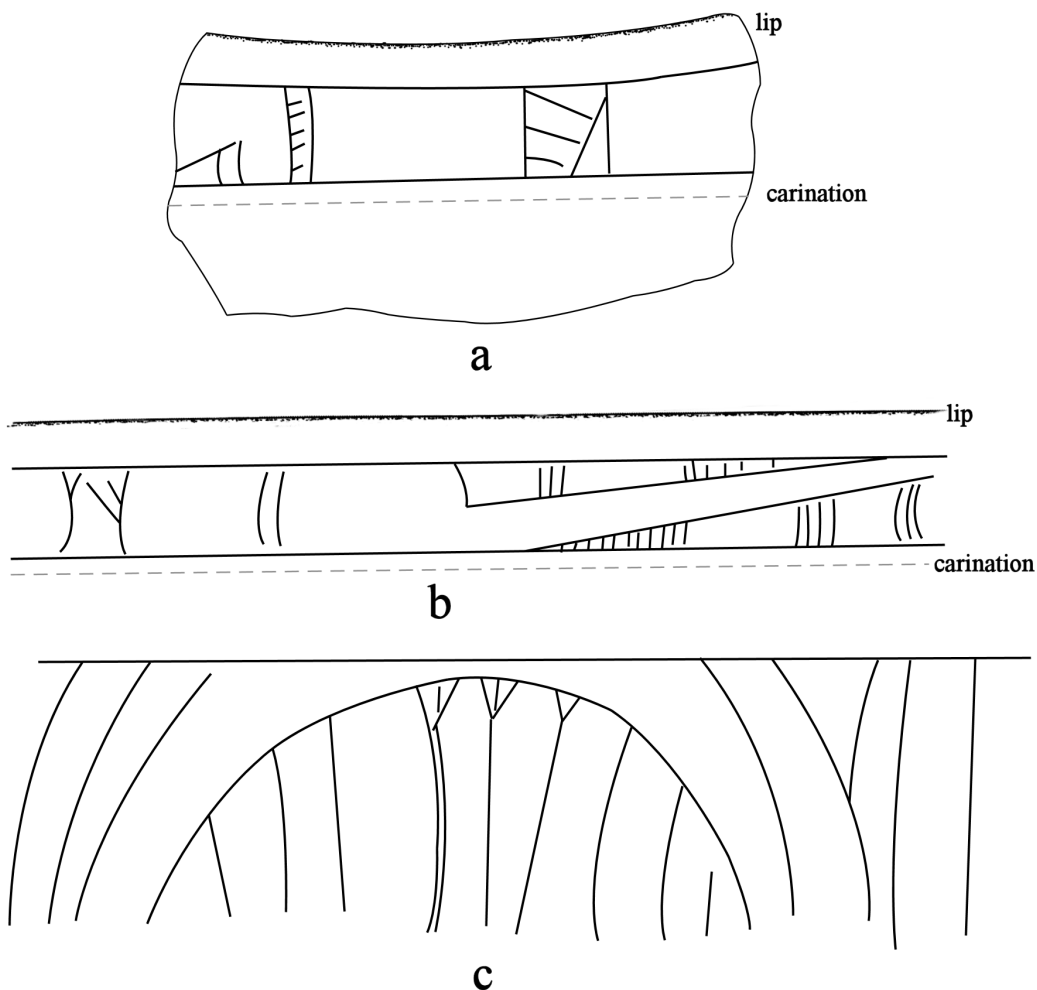


Figure 79. Grog-bone and grog-tempered rim and body sherds from Barkman Engraved, Hatchel Engraved, and Simms Engraved vessels in Zone G in the Hatchel platform mound.

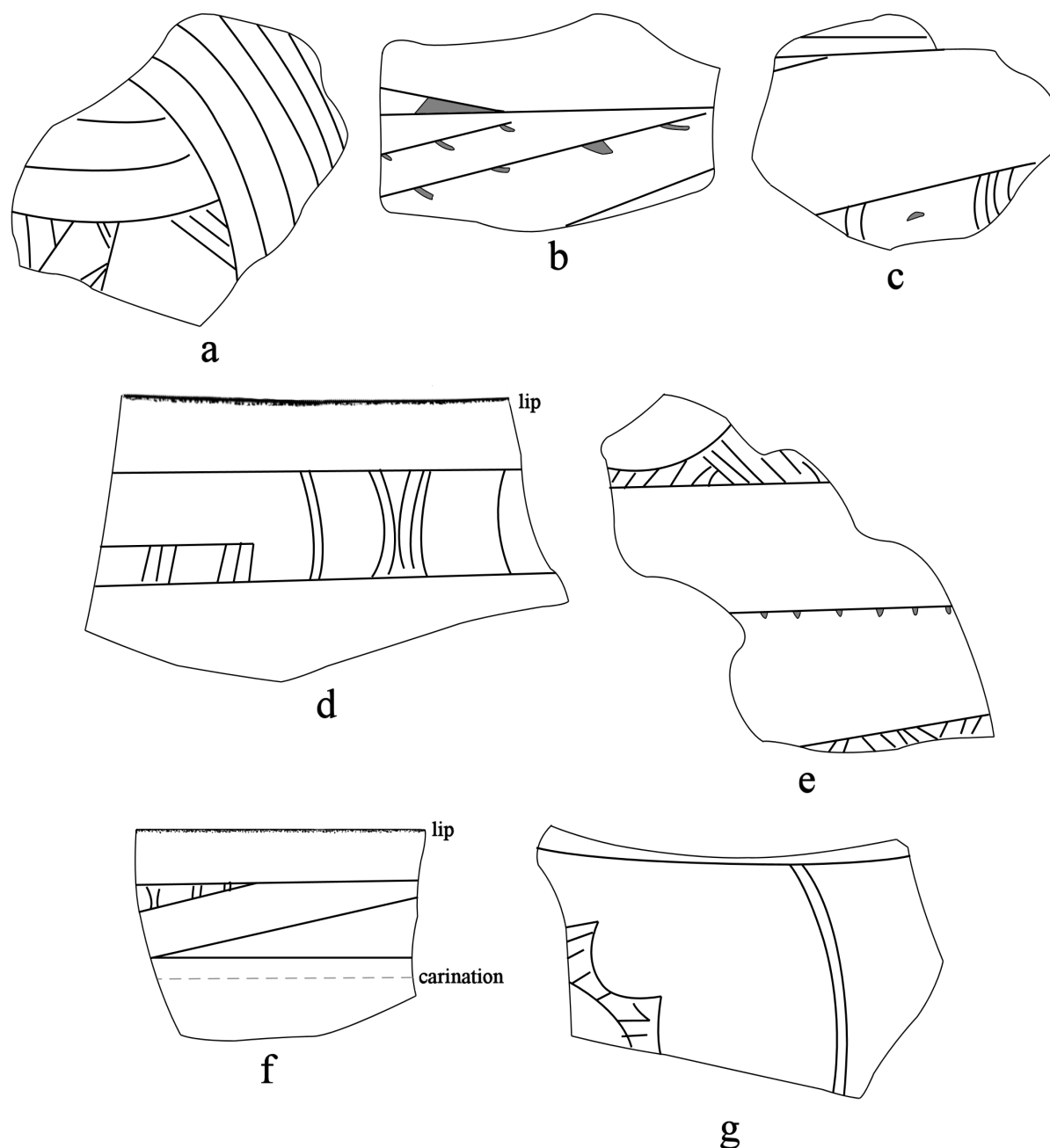


Figure 80. Grog-tempered and bone-tempered fine ware rim and body sherds in Zone G.

A single Means Engraved lower rim sherd is in Zone G (see Figure 80b). The sherd has horizontal and diagonal engraved lines with tick marks and a triangular excised area. Means Engraved is a Late Caddo period fine ware type, estimated to date from ca. A.D. 1500-1700 (Ann M. Early, November 2017 personal communication), manufactured by Caddo potters in the Ouachita River valley in Southwest Arkansas.

Unique grog-tempered fine ware sherds in Zone G have curvilinear engraved lines and zones of excised punctations (see Figure 81d-e) from bowls or carinated bowls. The one bowl rim sherd with engraved-zoned excised punctations also has a drilled suspension hole below the lip.

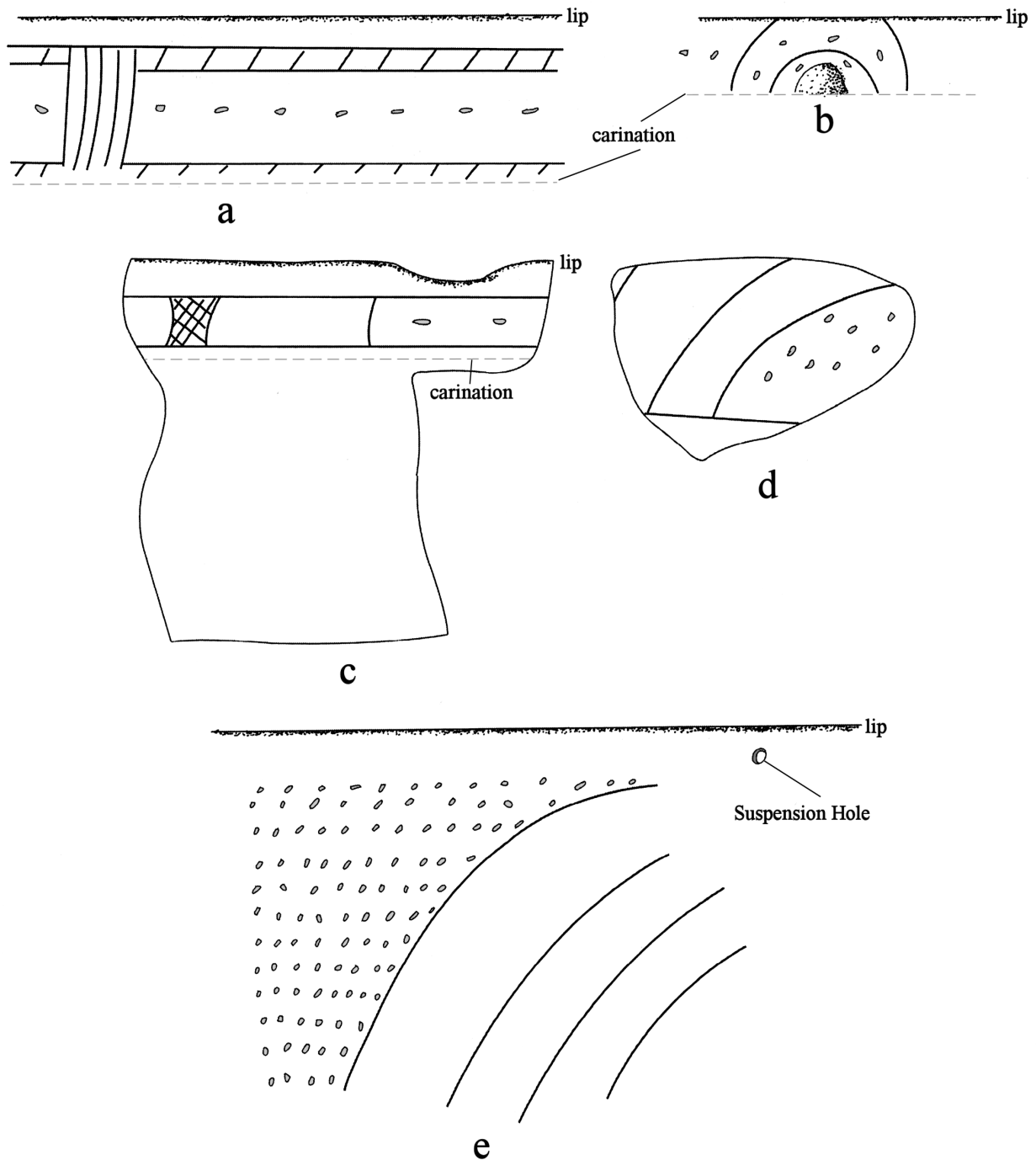


Figure 81. Selected fine ware sherds from grog-tempered vessels in Zone G in the Hatchel platform mound.

One of the engraved-red-slipped sherds is from a Avery Engraved vessel (see Table 29). Three of these slipped sherds are rims with horizontal engraved lines, probably from carinated bowls or compound bowls. Grog-tempered sherds with a hematite-rich red slip on one or both vessel surfaces as the only form of decoration are common in Zone G. They include two rims and 42 body sherds (see Table 29).

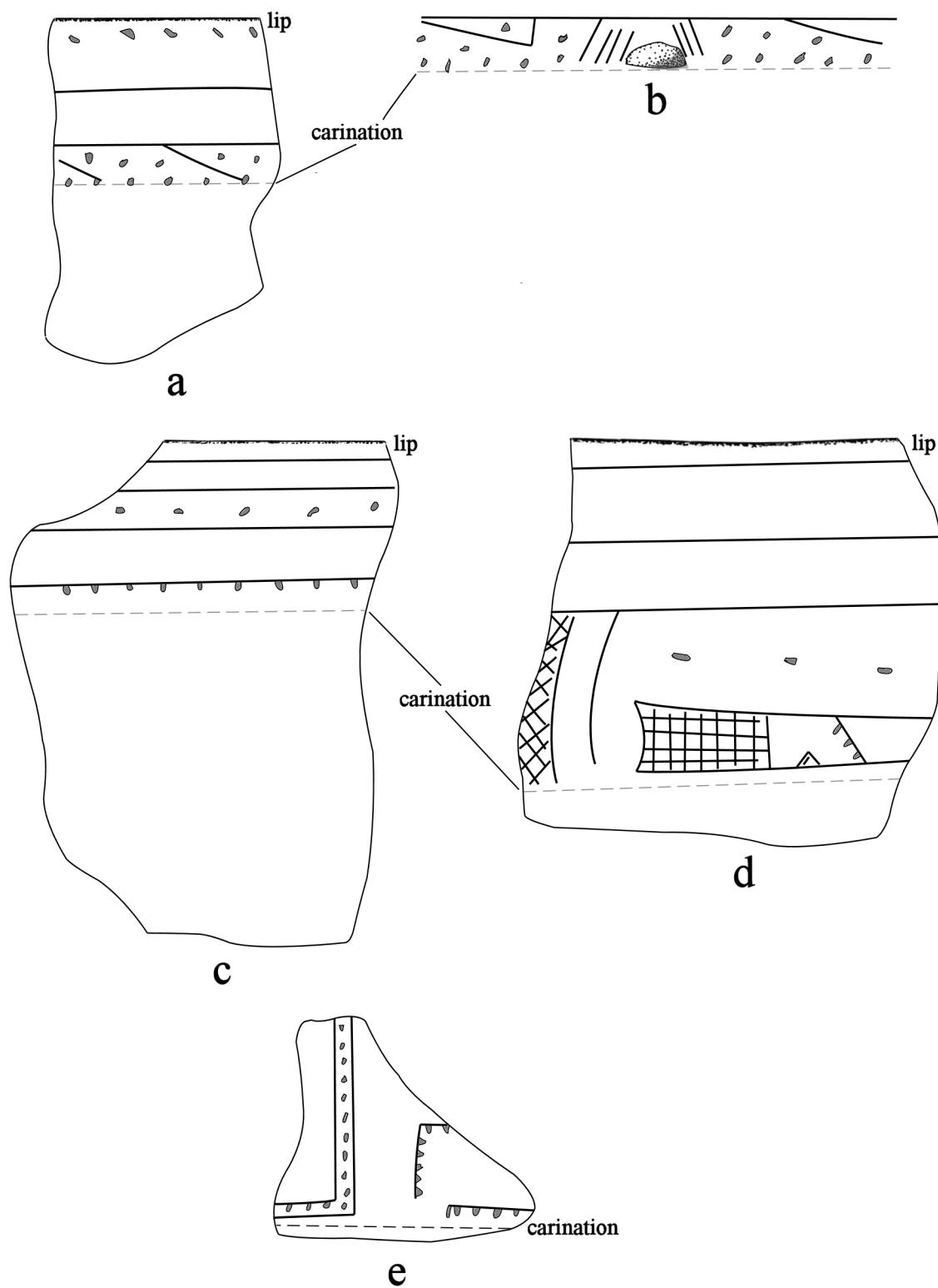


Figure 82. Grog- and grog-bone-tempered sherds from Barkman Engraved and Belcher Engraved vessels in Zone G in the Hatchel platform mound.

The grog-tempered Keno Trailed sherds in Zone G have circular, curvilinear, curvilinear opposed, and horizontal-diagonal trailed lines (Figure 83a-b). One body sherd probably from a Keno Trailed, *var. McClendon* vessel has curvilinear trailed lines that end in a hooked arm element (Figure 83c).

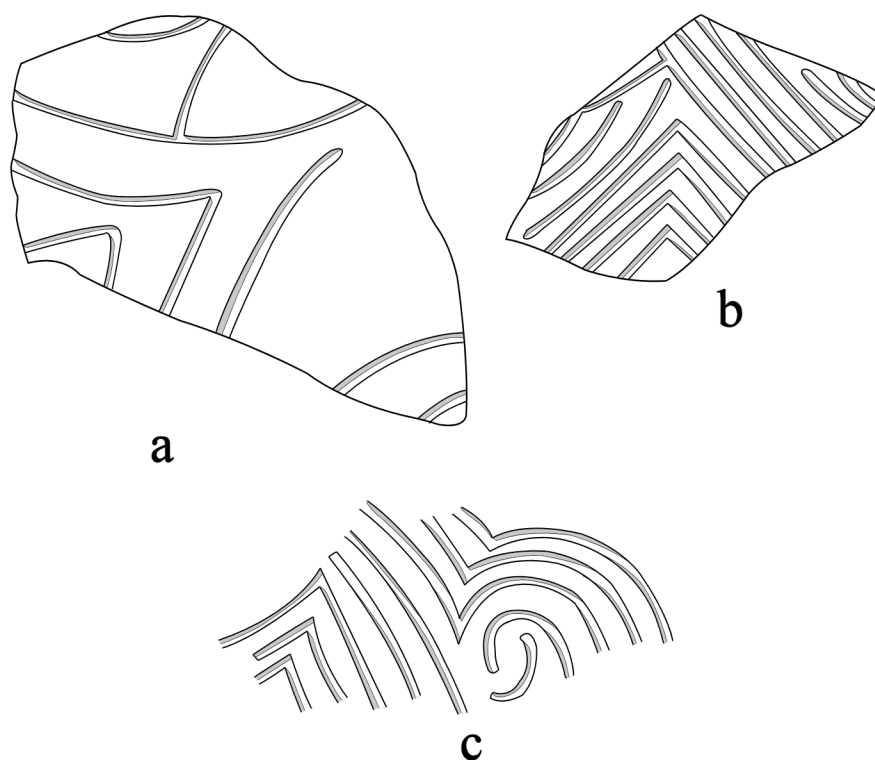


Figure 83. Selected grog-tempered Keno Trailed body sherds in Zone G in the Hatchel platform mound.

The grog-bone-tempered sherds in Zone G include both utility wares (n=22, 44 percent) and fine wares (n=28, 56 percent) (Table 30). About 45 percent of the utility wares have brushed marks, either as the sole decorative method, or in association with applied, applied-punctated, incised, or punctated elements. These are from Karnack Brushed-Incised and Pease Brushed-Incised vessels. One body sherd from a Nash Neck Banded or McKinney Applied vessel has a straight applied ridge, and the sherds from incised vessels have curvilinear (see Figure 77b), parallel, parallel-overlapping, and straight incised lines. The remainder of the grog-bone-tempered utility wares include sherds from Nash Neck Banded, McKinney Plain, and Foster Trailed-Incised, *var. unspecified* vessels (Table 30).

The grog-bone-tempered fine ware sherds in Zone G are from vessels with engraved (n=10), engraved-punctated (n=3), engraved-slipped (n=3), excised punctated (n=1), red-slipped (n=8), trailed (n=2), and trailed-incised (n=1) elements. These are from Barkman Engraved (n=3, see Figure 79a), Belcher Engraved (n=1, see Figure 82d), Bowie Engraved (n=1), Hatchel Engraved (n=2), and Simms Engraved (n=1) carinated bowls and bottles, and Keno Trailed vessels. The most distinctive of the grog-bone-tempered fine ware sherds in Zone G is a trailed-incised Glassell Incised vessel with vertical and vertical curvilinear incised lines on the rim and curvilinear trailed lines on the body (see Figure 77e).

Table 30. Grog-bone-tempered decorated sherds and decorated elements in Zone G.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Appliqued</i>			
straight appliqued ridge	-	1	1
<i>Brushed</i>			
diagonal brushed marks	-	1	1
horizontal brushed marks	1	-	1
parallel brushed marks	-	3	3
<i>Brushed-Appliqued</i>			
parallel brushed-straight appliqued ridge (Pease Brushed-Incised)	-	1	1
vertical brushed-vertical appliqued ridges (Pease Brushed-Incised)	-	1	1
<i>Brushed-Appliqued-Punctated</i>			
tool punctated row-straight appliqued fillet, with parallel brushed marks between (Pease Brushed-Incised)	-	1	1
<i>Brushed-Incised</i>			
parallel brushed-incised marks and lines	-	1	1
<i>Brushed-Punctated</i>			
horizontal brushed marks-tool punctated rows through the brushing (Pease Brushed-Incised)	1	-	1
<i>Incised</i>			
curvilinear opposed incised lines	-	1	1
parallel incised lines	-	3	3
parallel and overlapping incised lines	-	1	1
straight incised line	-	1	1
<i>Neck Banded (Nash Neck Banded)</i>			
parallel neck banded rows	-	1	1
<i>Roughened (McKinney Plain)</i>			
roughened surface	1	1	2
<i>Trailed (Foster Trailed-Incised)</i>			
multiple curvilinear trailed lines	-	2	2

Table 30. Grog-bone-tempered decorated sherds and decorated elements in Zone G, cont.

Decorative method and element	Rim	Body	N
Fine Ware			
<i>Engraved</i>			
curvilinear engraved line with open pendant triangles-cross-hatched curvilinear engraved zone (Hatchel Engraved)	-	1	1
curvilinear hatched zone	-	1	1
curvilinear scroll fill zone with cross-hatched column and narrow excised zone (Barkman Engraved)	-	1	1
hatched triangle el., interior vessel surface (Bowie Engraved)	1	-	1
horizontal-closely-spaced curvilinear engraved lines with hatched pendant triangle el. (Hatchel Engraved)	-	1	1
horizontal-diagonal engraved lines	-	2	2
horizontal engraved lines-hatched vertical columns-hatched triangle el. (Barkman Engraved)	1	-	1
parallel engraved lines	-	1	1
vertical engraved lines, closely-spaced	-	1	1
<i>Engraved-Punctated</i>			
horizontal engraved lines with excised punctated row between lines (Simms Engraved)	1	-	1
horizontal engraved lines—one with tick marks-and excised punctated row between (Barkman Engraved)	-	1	1
horizontal engraved lines-cross-hatched bracket and rectangular el.-horizontal excised punctated row (Belcher Engraved)	1	-	1
<i>Engraved-Red-Slipped</i>			
1+ horizontal engraved line-int./ext. red-slipped	-	1	1
horizontal-curvilinear engraved lines-curvilinear hatched zone	-	1	1
vertical-curvilinear engraved lines-int./ext. red-slipped	-	1	1
<i>Excised Punctated</i>			
horizontal excised punctated row mid-panel	-	1	1
<i>Red-Slipped</i>			
int./ext. red-slipped	1	7	8
<i>Trailed (Keno Trailed)</i>			
curvilinear trailed lines	-	1	1
multiple curvilinear trailed lines	-	1	1

Table 30. Grog-bone-tempered decorated sherds and decorated elements in Zone G, cont.

Decorative method and element	Rim	Body	N
<i>Trailed-Incised (Glassell Incised)</i>			
vertical and vertical curvilinear incised lines on the rim- curvilinear trailed lines on the body	1	-	1
Totals	9	41	50

Only about 22 percent of the bone-tempered decorated sherds from Zone G are from utility ware vessels (Table 31). One is a body sherd from a Pease Brushed-Incised vessel with an applied ridge creating panels with brushed marks, and the other is a Foster Trailed-Incised, *var. unspecified* body sherd with parallel trailed lines.

Table 31. Bone-tempered decorated sherds and decorated elements in Zone G.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Brushed-Appliqued</i>			
parallel brushed marks-straight applied ridge	-	1	1
<i>Trailed (Foster Trailed-Incised)</i>			
parallel trailed lines	-	1	1
Fine Ware			
<i>Engraved</i>			
horizontal engraved line, int. vessel surface (Bowie Engraved)	1	-	1
<i>Engraved-Red-Slipped</i>			
1-2+ widely-spaced horizontal engraved lines; int./ext. red-slipped	-	2	2
horizontal-vertical curvilinear lines-curvilinear hatched zone, int./ext. red-slipped (Avery Engraved)	-	1	1
parallel engraved lines and hatched zone, int./ext. red-slipped	-	1	1
<i>Red-Slipped</i>			
int./ext. red-slipped	-	2	2
Totals	1	8	9

The bone-tempered fine wares from Zone G include two body sherds with red-slipped surfaces and four body sherds with engraved and red-slipped decorative elements. One of these is from an Avery Engraved vessel (see Figure 80g and Table 31). The one engraved bone-tempered sherd in this zone is from a Bowie Engraved vessel with an interior horizontal engraved line (see Suhm and Jelks 1962:Plate 9h).

The shell-tempered decorated sherds in Zone G are evenly divided between utility wares (n=15) and fine wares (n=15) (Table 32). Among the utility wares are five body sherds with applied node, fillet, and ridge elements; these are likely from McKinney Applied and Nash Neck-Banded vessels.

Twenty percent of the shell-tempered utility wares in Zone G are from Karnack Brushed-Incised vessels. Two body sherds have a straight incised line adjacent to linear tool punctated rows (see

Table 32. Shell-tempered decorated sherds and decorated elements in Zone G.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Appliqued</i>			
3+ rows of applied nodes and straight applied ridge	-	1	1
straight applied ridge	-	2	2
vertical applied fillet	-	1	1
vertical row of applied nodes	1	-	1
<i>Brushed</i>			
horizontal brushed	-	1	1
parallel brushed	-	2	2
<i>Incised-Punctated</i>			
straight incised line-linear tool punctated row	-	1	1
straight incised line and diagonal linear tool punctated row	-	1	1
<i>Neck Banded (Nash Neck Banded)</i>			
horizontal neck banded rows	-	1	1
<i>Neck Banded-Appliqued-Brushed (Nash Neck Banded)</i>			
horizontal neck banded rows-horizontal brushed marks-vertical applied ridge below the lip	1 1	- -	1 1
<i>Punctated</i>			
tool punctated row mid-rim	1	-	1
<i>Trailed (Foster Trailed-Incised)</i>			
diagonal opposed trailed lines	-	1	1

Table 32. Shell-tempered decorated sherds and decorated elements in Zone G, cont.

Decorative method and element	Rim	Body	N
Fine Ware			
<i>Engraved</i>			
horizontal engraved lines and curvilinear bracket el.	1	-	1
horizontal-diagonal engraved lines	-	1	1
horizontal lines-set of vertical engraved lines	-	1	1
<i>Engraved-Red-Slipped</i>			
widely spaced curvilinear engraved lines	-	1	1
1-2+ widely spaced horizontal engraved lines-int./ext. red-slipped	-	3	3
<i>Red-Slipped</i>			
int. red-slipped	-	1	1
int./ext. red-slipped	-	7	7
Totals	5	25	30

Table 32). Another 20 percent of the utility wares are from Nash Neck Banded vessels, one rim sherd has a tool punctated row mid-rim (Emory Punctated-Incised), and a body sherd is from a Foster Trailed-Incised, *var. unspecified* vessel.

The shell-tempered fine wares in Zone G are principally from Clement Redware vessels (n=8 sherds or 53 percent of the shell-tempered fine wares in this zone), and vessels with engraved and red-slipped decorative elements (n=4) (see Table 32). The remaining shell-tempered fine wares in Zone G are engraved rim and body sherds. The one rim sherd has horizontal engraved lines and a curvilinear bracket, while the body sherds have either horizontal-diagonal engraved lines or horizontal-vertical engraved lines.

Zone H Decorated Sherd Elements

The initial platform mound zone with structures, Zone H, has three different structures arranged from east to west across the hard-packed mound platform (Figure 84). There are also apparent mid-den deposits (i.e., black humic deposits) by two of the structures (Features 18 and 19/20) as well as ash deposits and several extramural hearths and various large pit and small pit features. The highest number of sherds from features in Zone H are from Feature 18 and Feature 19/20.

Beginning on the western side of the mound platform is Feature 16, a circular structure with an extended entranceway facing to the southeast (see Figure Zone H). It was built on a brown sandy

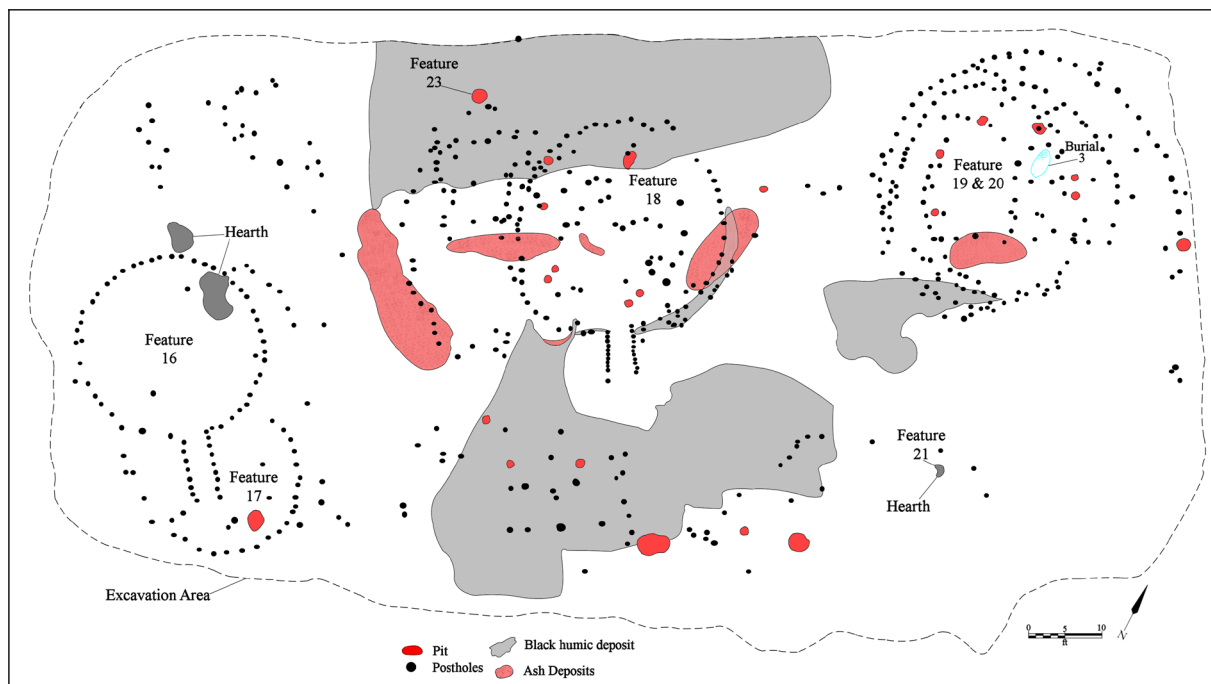


Figure 84. Plan map of Zone H structures and other features in the platform mound at the Hatchel site.

loam deposit (Beatty 1939:325). The extended entranceway to the structure appears to be blocked by a semi-circular arc or partition of post holes (Feature 17), although the WPA archaeologist suggested that Feature 16 “had been superimposed on the remains of” Feature 17 (Beatty 1939:326, 333). Further north of Feature 16 is a roughly rectangular cluster of post holes that may mark a *ramada* or arbor.

The structure in the center of the mound platform, Feature 18, also has an extended entranceway oriented to the southeast (see Figure 84). The structure was built atop a small clay mound deposit (Beatty 1939:286, 335). Just outside the west wall of Feature 18 is a ca. 4.2 x 3.4 m rectangular area of post holes that may be an elevated work platform, arbor, or *ramada* (see Figure 84). There are “black humic deposits” or probable midden deposits to the immediate north and south of Feature 18; the northern such deposits overlap with the Feature 18 post hole pattern, suggesting it accumulated atop the structure, and thus these deposits may be associated with one or both of the other structures in Zone H.

The easternmost structure in Zone H, Feature 19/20, in Zone H is represented by a confusing array of post holes (see Figure 84). They suggest a circular structure with double walls of posts and an interior partition on the western side of the structure. A small “black humic deposit” is present alongside the southern wall of the structure. Burial 3 is associated with Feature 19/20.

The distribution of ceramic sherds in Zone H indicates that broken vessels were discarded most frequently outside of the structures, rather than in them. The highest densities of sherds were distributed primarily well north and northwest of Feature 16 and not far west of Feature 18, and between Feature 18 and Features 19/20 (Beatty 1939:548) (Figure 85). Sherds, however, were also common within Features 19/20, suggesting re-use of the area while several overlapping structures were built on the northern and eastern part of the mound (see Figure 84).

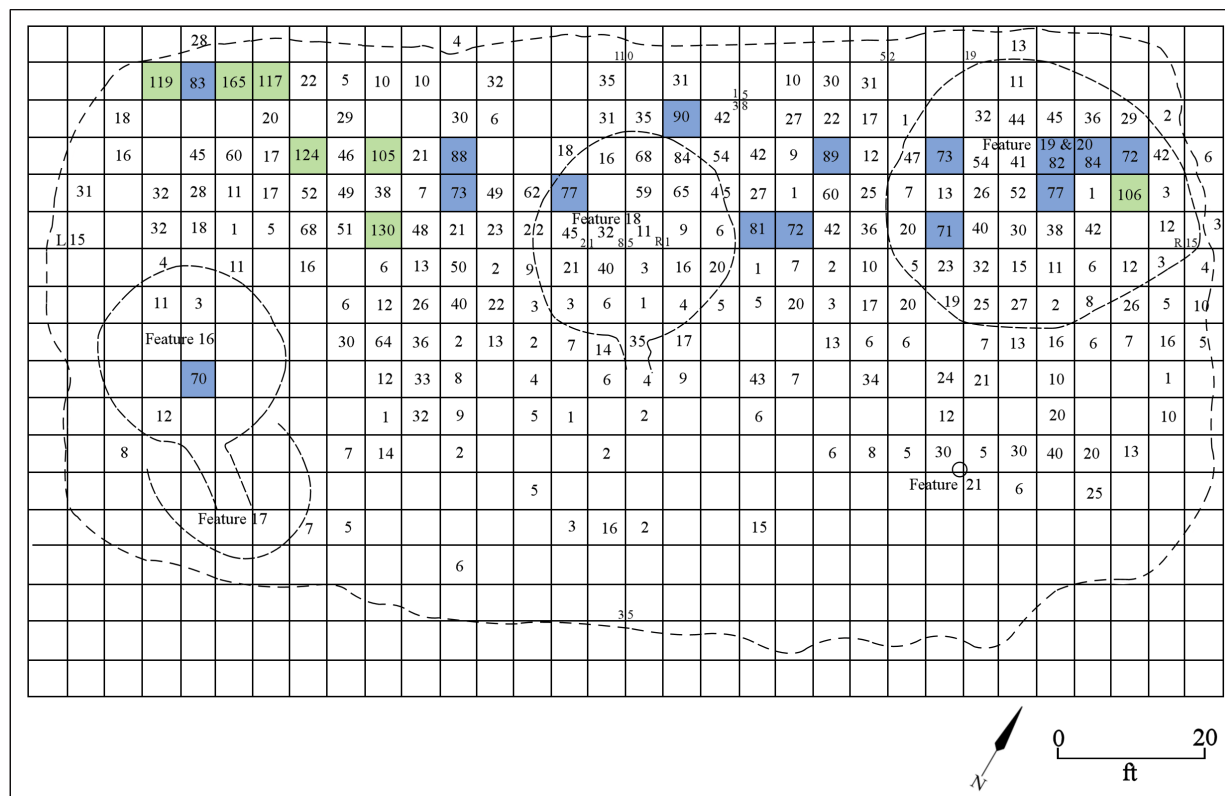


Figure 85. Distribution of ceramic sherds in Zone H of the platform mound at the Hatchel site (41BW3).

A large sample of grog-tempered decorated sherds was recovered in Zone H of the primary platform mound, including 681 utility wares and 911 fine ware sherds (Table 33). Utility ware sherds comprise 42.8 percent of this assemblage; 34.3 percent ($n=112$) of the 327 grog-tempered rim sherds in Zone H are from utility wares.

The principal utility wares among the Zone H grog-tempered sherds have incised ($n=133$, 19.5 percent of the grog-tempered utility wares), applied ($n=118$, 17.3 percent), brushed ($n=77$, 11.3 percent), ridged ($n=67$, 9.8 percent), brushed-applied ($n=55$, 8.1 percent), roughened ($n=49$, 7.2 percent), and neck banded ($n=41$, 6.0 percent) decorative elements (see Table 33). About 78 percent of the utility ware rim sherds are from these decorated groups in Zone H.

The grog-tempered applied sherds in Zone H include several with applied nodes, fillets, and ridges, or combinations of applied elements (see Table 33). This includes sherds with applied ridges in chevron elements (Figure 86a), vertical applied ridges with applied nodes between the ridges (Figure 86d) or parallel to them (Figure 86c). These sherds, almost all body sherds, are likely from the bodies of McKinney Applied and Nash Neck Banded jars. Sherds from applied-incised decorated vessels of the same types have sets of straight, parallel, vertical, and vertical-diagonal incised lines associated with nodes and applied ridges likely oriented vertically on the vessel body.

Brushed vessels in this Zone H assemblage have horizontal, diagonal, and horizontal-diagonal brushing marks on the rims, with parallel, opposed, and vertical brushing marks on vessel bodies (see Table 33), and are from Karnack Brushed-Incised jars. Brushed-applied rim sherds have

Table 33. Grog-tempered decorated sherds and decorated elements in Zone H.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Appliqued</i>			
appliqued node below the lip	2	-	2
appliqued node, circular	-	3	3
4+ rows of appliqued nodes and straight appliqued ridge	-	1	1
appliqued ridges in chevron el.	-	5	5
curvilinear appliqued ridge	-	1	1
horizontal-vertical-diagonal appliqued ridges	-	1	1
parallel appliqued ridges	-	9	9
straight appliqued fillet	-	5	5
straight appliqued ridge	-	81	81
straight appliqued ridge and opposed straight appliqued fillet	-	1	1
vertical appliqued ridges	1	7	8
vertical appliqued ridges-appliqued nodes between ridges	-	1	1
<i>Appliqued-Incised</i>			
closely-spaced parallel incised lines-straight appliqued fillet	-	1	1
parallel incised lines and appliqued node between lines	-	1	1
parallel incised lines-parallel appliqued ridges	-	2	2
parallel incised lines-straight appliqued ridge	-	2	2
straight incised line-straight appliqued ridge	-	11	11
straight appliqued ridge-diagonal incised line	-	1	1
straight appliqued ridge-opposed incised line	-	1	1
vertical incised lines-horizontal incised line at rim-body juncture—short vertical appliqued ridges [body]	-	1	1
vertical-diagonal incised lines-vertical appliqued ridge	1	-	1
<i>Brushed</i>			
curvilinear brushed marks	-	1	1
diagonal brushed marks	2	1	3
horizontal brushed	14	1	15
horizontal-diagonal brushed marks	1	-	1
opposed brushed marks	-	7	7
parallel brushed marks	-	48	48
vertical brushed marks	-	2	2
<i>Brushed-Appliqued</i>			
diagonal brushed marks-straight appliqued ridge	-	2	2
diagonal brushed marks-straight appliqued fillet	-	1	1
diagonal-parallel brushed marks-straight appliqued ridge (Pease Brushed-Incised)	-	1	1

Table 33. Grog-tempered decorated sherds and decorated elements in Zone H, cont.

Decorative method and element	Rim	Body	N
diagonal opposed applied ridges-diagonal brushed marks between	-	1	1
horizontal brushed-vertical row of applied nodes	1	-	1
horizontal brushed-vertical applied ridge	2	-	2
parallel brushed zone and straight applied ridge	-	1	1
parallel brushed-applied node	-	1	1
parallel applied ridges-parallel brushed marks between applied ridges (Pease Brushed-Incised)	-	6	6
parallel brushed and parallel applied ridges (Pease Brushed-Incised)	-	6	6
parallel brushed-straight applied fillet (Pease Brushed-Incised)	-	1	1
parallel brushed and straight applied ridge (Pease Brushed-Incised)	-	26	26
vertical brushed and applied node	-	1	1
vertical brushed-vertical applied ridge	1	1	2
vertical applied ridges-parallel brushed marks between the ridges (Pease Brushed-Incised)	-	1	1
vertical applied ridge-opposed brushed marks	-	1	1
<i>Brushed-Applied-Incised</i>			
horizontal brushed-vertical row of applied nodes- horizontal incised line at rim-body juncture	1	-	1
horizontal brushed marks-vertical row of short applied ridges-horizontal incised line at rim-body juncture	2	-	2
vertical brushed marks-vertical row of applied nodes- horizontal incised line at rim-body juncture	1	-	1
<i>Brushed-Applied-Punctated</i>			
parallel brushed marks-straight applied ridge—tool punctated row	-	1	1
<i>Brushed-Incised</i>			
diagonal brushed-incised marks and lines	-	1	1
diagonal opposed brushed-incised lines and marks	-	1	1
horizontal incised line above diagonal brushing	-	1	1
horizontal brushed and overlying vertical incised lines	2	-	2
parallel brushed-incised marks and lines	-	9	9
parallel brushed-straight incised line	-	3	3
parallel brushed and overlying opposed incised lines	-	1	1
vertical brushed-incised marks and lines	-	1	1

Table 33. Grog-tempered decorated sherds and decorated elements in Zone H, cont.

Decorative method and element	Rim	Body	N
vertical incised lines-opposed brushed marks	-	1	1
<i>Brushed-Punctated</i>			
horizontal brushed-marks-tool punctated row-diagonal brushed	-	1	1
tool punctated row above diagonal brushed marks	-	1	1
vertical brushed marks [body]-tool punctated row at rim-body juncture	1	1-	
<i>Incised</i>			
cross-hatched incised lines	-	2	2
multiple curvilinear incised lines	-	2	2
opposed curvilinear incised lines	1	1	2
curvilinear hatched zone	-	1	1
diagonal incised lines	3	2	5
diagonal opposed incised lines	-	3	3
diagonal opposed incised lines divided by horizontal line (Foster Trailed-Incised)	1	-	1
hatched incised zone	-	2	2
1+ set of closely-spaced diagonal incised lines (Foster Trailed-Incised)	-	7	7
1+ set of short diagonal incised lines above horizontal incised line (Foster Trailed-Incised)	-	1	1
1+ set of short diagonal incised lines (Foster Trailed-Incised)	-	3	3
2+ sets of diagonal incised lines (Foster Trailed-Incised)	1	7	8
3+ sets of short diagonal incised lines (Foster Trailed-Incised)		3	3
4+ sets of short diagonal incised lines (Foster Trailed-Incised)	-	1	1
2+ sets of diagonal incised lines between horizontal incised lines (Foster Trailed-Incised)	-	1	1
closely-spaced horizontal incised lines	1	-	1
horizontal incised lines	2	-	2
1+ horizontal incised line	2	2	4
2+ horizontal incised lines	2	-	2
3+ horizontal incised lines	1	1	2
10+ horizontal incised lines	1	-	1
horizontal-cross-hatched incised lines	1	-	1
horizontal-diagonal incised lines	5	3	8
horizontal incised line-diagonal hatched horizontal zones	-	4	4
horizontal incised lines-diagonal opposed incised lines	-	2	2
horizontal-vertical incised lines	1	-	1
opposed incised lines	-	1	1

Table 33. Grog-tempered decorated sherds and decorated elements in Zone H, cont.

Decorative method and element	Rim	Body	N
sets of closely-spaced parallel incised lines	-	2	2
closely-spaced parallel incised lines	-	5	5
parallel incised lines	-	41	41
parallel-opposed incised lines	-	1	1
slanted scroll and curvilinear hatched scroll fill zone (Crockett Curvilinear Incised)	1	-	1
straight incised line	-	10	10
vertical incised lines-closely-spaced (Karnack Brushed-Incised)	1	-	1
vertical-diagonal opposed incised lines (Pease Brushed-Incised)	-	1	1
<i>Incised-Punctated</i>			
circular incised el. filled with tool punctations	-	1	1
circular and curvilinear incised zones filled with cane punctations (Crockett Curvilinear Incised)	-	2	2
curvilinear incised line-tool punctated zone	-	1	1
curvilinear incised zone filled with hatched incised lines- rectilinear tool punctated row	-	1	1
curvilinear incised zone filled with small circular punctations	-	1	1
curvilinear incised zone filled with tool punctations	-	1	1
curvilinear incised zones filled with tool punctations	-	1	1
diagonal incised lines-triangular zone with tool punctations	-	1	1
diagonal opposed incised lines-triangle elements filled with curvilinear hatched lines-central incised circle with small circular punctations (Crockett Curvilinear Incised)	1	-	1
horizontal incised lines and zone of cane punctations	-	1	1
horizontal incised lines-tool punctated row below the lip	5	-	5
horizontal-diagonal incised lines-tool punctated row below the lip	1	-	1
horizontal incised line-incised triangle zone with tool punctations	1	-	1
horizontal incised zones filled with tool punctations	-	4	4
horizontal incised lines above tool punctated row	-	4	4
horizontal-vertical incised lines-tool punctated row between tool punctated rows above horizontal incised line	-	1	1
parallel incised lines-fingernail punctated rows	-	1	1
parallel incised lines-row of fingernail punctations between	-	1	1
parallel incised lines-adjacent tool punctated row/rows	-	2	2
parallel incised lines-tool punctated row and separate tool punctated row	-	1	1

Table 33. Grog-tempered decorated sherds and decorated elements in Zone H, cont.

Decorative method and element	Rim	Body	N
parallel incised lines-row of tool punctations between	-	1	1
straight incised line below 2+ rows of fingernail punctations	-	1	1
straight incised panel filled with tool punctations	-	1	1
triangle incised zone with tool punctations	-	1	1
<i>Neck Banded (Nash Neck Banded)</i>			
horizontal neck bands	12*	26	38
<i>Neck Banded-Appliqued (Nash Neck Banded)</i>			
horizontal neck bands-vertical applique ridge	1	-	1
horizontal neck bands-vertical applique ridges-vertical applied ridges on body	1	-	1
<i>Neck Banded-Incised (Nash Neck Banded)</i>			
horizontal neck bands and short vertical incised lines under lip	1	-	1
<i>Punctated</i>			
cane punctated rows	-	1	1
fingernail punctated rows	1	7	8
diagonal tool punctated row	-	2	2
linear tool punctated row	-	4	4
tool punctated row/rows	4	10	14
<i>Ridged (Belcher Ridged)</i>			
parallel ridged	-	11	11
straight ridge el.	-	1	1
vertical ridged	-	2	2
<i>Ridged-Brushed (Belcher Ridged)</i>			
parallel ridged-parallel brushed	-	28	28
straight ridge and opposed brushing marks	-	1	1
<i>Ridged-Incised (Belcher Ridged)</i>			
parallel ridged-parallel incised lines	-	26	26
<i>Roughened (McKinney Plain)</i>			
roughened surface	25	24	49
<i>Roughened-Appliqued (McKinney Appliqued)</i>			
roughened rim-vertical applique ridge under rim peak	2	-	2
applied node below lip; roughened surface	1	-	1

Table 33. Grog-tempered decorated sherds and decorated elements in Zone H, cont.

Decorative method and element	Rim	Body	N
<i>Trailed (Foster Trailed-Incised)</i>			
curvilinear trailed line	-	1	1
multiple curvilinear trailed lines	-	12	12
curvilinear and diagonal trailed lines	1	-	1
diagonal opposed trailed lines	-	1	1
closely-spaced parallel trailed lines	-	1	1
straight trailed line	-	2	2
<i>Trailed-Incised (Foster Trailed-Incised)</i>			
2+ sets of short diagonal incised lines-horizontal trailed lines between sets	-	1	1
diagonal-horizontal incised lines [rim]-diagonal and curvilinear trailed lines	-	1	1
vertical trailed line-diagonal opposed incised lines	-	1	1
Fine Ware			
<i>Engraved</i>			
circle el. with curvilinear engraved line	-	1	1
circle el.-horizontal engraved line	-	1	1
circle el.-straight engraved line	-	1	1
circle el. with tick marks, horizontal engraved line, and hatched bracket el	-	1	1
cross-hatched engraved zone	-	9	9
curvilinear cross-hatched zone	-	1	1
cross-hatched zone with negative oval (Hodges Engraved)	-	1	1
cross-hatched engraved triangle el.	-	1	1
cross-hatched opposed triangular zones	-	1	1
closely-spaced set of vertical curvilinear engraved lines (Glassell Engraved)	-	1	1
closely-spaced set of vertical curvilinear engraved lines- vertical hatched zone (Glassell Engraved)	-	1	1
closely-spaced set of vertical engraved lines-hatched and cross-hatched zones	-	1	1
curvilinear engraved line	-	26	26
curvilinear engraved line-curvilinear excised zone	-	1	1
curvilinear engraved line-cross-hatched triangle el.	-	1	1
curvilinear engraved line/lines-hatched triangle el.	-	5	5
curvilinear engraved lines, multiple	-	34	34
curvilinear engraved lines ending in hooked arm el. (Taylor Engraved)	-	1	1

Table 33. Grog-tempered decorated sherds and decorated elements in Zone H, cont.

Decorative method and element	Rim	Body	N
curvilinear engraved lines ending in hooked arm el.-open pendant triangle on one curvilinear line (Taylor Engraved)	-	1	1
curvilinear engraved lines-cross-hatched curvilinear zone Hodges Engraved)	-	4	4
curvilinear engraved line-narrow curvilinear hatched zone	-	3	3
curvilinear engraved zone-narrow curvilinear hatched zones- circular el. with inner engraved circle (Avery Engraved)	-	2	2
curvilinear-diagonal engraved lines-hatched pendant triangle (Hatchel Engraved)	-	1	1
curvilinear engraved lines-diagonal hatched curvilinear zone	-	3	3
curvilinear engraved lines-excised zone	-	1	1
curvilinear engraved lines-excised zone-excised spur el.	-	1	1
curvilinear engraved lines-open pendant triangles	-	1	1
curvilinear opposed engraved lines	-	4	4
curvilinear engraved lines in zone-divided by horizontal hatched bracket el. (Hatchel Engraved)	-	1	1
curvilinear-vertical engraved lines-excised triangle el.	-	1	1
curvilinear-vertical-diagonal engraved lines in zone (Hatchel Engraved)	-	1	1
closely-spaced set of vertical curvilinear engraved lines- horizontal engraved line (Glassell Engraved)	-	1	1
closely-spaced opposed sets of vertical curvilinear lines- curvilinear line with excised spurs (Glassell Engraved)	1	-	1
diagonal engraved line/lines	1	6	7
diagonal engraved zone with curvilinear excised areas	-	1	1
diagonal-diagonal curvilinear engraved lines	-	1	1
diagonal engraved lines-hatched triangle el.	-	1	1
diagonal opposed engraved lines	-	2	2
diagonal opposed-straight engraved lines	-	1	1
diagonal opposed excised lines	-	1	1
circle hatched el.	-	1	1
curvilinear hatched zone	-	3	3
curvilinear hatched triangle el.	-	2	2
diagonal hatched zone	-	3	3
narrow horizontal engraved hatched zone	-	7	7
hatched bracket el.	-	2	2
hatched triangle el.	-	1	1
horizontal hatched zone	-	2	2
vertical hatched zone	-	1	1

Table 33. Grog-tempered decorated sherds and decorated elements in Zone H, cont.

Decorative method and element	Rim	Body	N
closely-spaced horizontal engraved lines	1	3	4
3+ sets of closely-spaced horizontal engraved lines	1	-	1
1+ horizontal engraved line	32	95	127
2-3+ horizontal engraved lines	57	37	94
4+ horizontal engraved lines	3	1	4
horizontal engraved lines-cross-hatched zone	-	1	1
horizontal engraved lines-diagonal hatched zone	1	1	2
horizontal engraved lines-hatched triangle el.	1	2	3
horizontal engraved lines-horizontal hatched zone	1	3	4
horizontal engraved lines-oval-shaped el.	1	-	1
horizontal engraved lines-oval-shaped el.-cross-hatched engraved zone	1	-	1
1+ horizontal engraved line [upper panel]-horizontal and cross-hatched engraved lines [lower panel]	-	1	1
horizontal-curvilinear engraved lines with open pendant triangles (Haley Engraved)	-	1	1
horizontal-curvilinear engraved lines with open triangle and hatched triangle el.	-	1	1
horizontal engraved lines-rectilinear engraved el. (Barkman Engraved)	1	-	1
horizontal engraved line-vertical excised bracket el.	-	1	1
horizontal engraved lines-vertical hatched bracket el.	1	-	1
horizontal engraved lines-vertical hatched zone (Barkman Engraved)	4	-	4
horizontal engraved lines-triangle el. with central circle- connected excised columns (Bowie Engraved)	-	1	1
horizontal engraved lines-horizontal-triangular zones with excised triangle el. (Bowie Engraved)	1	1	2
horizontal engraved lines-horizontal row of engraved triangle el. (Bowie Engraved)	3	-	3
horizontal engraved line-vertical curvilinear engraved lines	-	6	6
horizontal engraved lines-vertical curvilinear hatched zone	-	1	1
horizontal lines-sets of curvilinear engraved lines	-	1	1
horizontal engraved lines-semi-circle engraved el.	2	-	2
excised bracket el.	-	1	1
excised bracket el. with negative oval el.	-	1	1
curvilinear engraved lines-curvilinear excised zones with spur el. (Haley Engraved)	-	1	1

Table 33. Grog-tempered decorated sherds and decorated elements in Zone H, cont.

Decorative method and element	Rim	Body	N
curvilinear excised zone with spur el. (Haley Engraved)	-	2	2
narrow excised zone	-	3	3
excised triangle el.	-	2	2
horizontal excised zone	1	2	3
horizontal engraved lines and diagonal excised zone	2	-	2
horizontal engraved lines and horizontal excised zone	2	-	2
horizontal-vertical excised lines and zone	-	1	1
horizontal-diagonal engraved lines	5	8	13
horizontal-diagonal engraved lines-cross-hatched zone	-	1	1
horizontal engraved line-short diagonal hatched lines	-	3	3
horizontal-diagonal engraved lines-curvilinear hatched triangle el. (Avery Engraved)	1	-	1
horizontal-diagonal engraved lines-hatched triangle el.	1	2	3
horizontal-diagonal opposed engraved lines	-	1	1
horizontal-diagonal opposed engraved zone	-	1	1
horizontal engraved lines-diagonal hatched bracket el. (Simms Engraved)	1	-	1
horizontal-vertical engraved lines	7	8	15
horizontal engraved line-vertical column with set of closely-spaced horizontal hatched line (Barkman Engraved)	-	1	1
horizontal engraved lines-sets of vertical engraved lines	-	2	2
horizontal engraved lines-horizontal-vertical hatched zones (Barkman Engraved)	1	-	1
horizontal engraved lines-vertical hatched zone (Barkman Engraved)	1	-	1
horizontal-vertical engraved lines-vertical hatched bracket el.	1	-	1
horizontal-vertical engraved lines-excised pendant triangles (Simms Engraved)	1	1	2
horizontal engraved lines-sets of vertical engraved lines (Simms Engraved)	1	2	3
horizontal-vertical engraved lines and diagonal hatched zone	-	1	1
horizontal-vertical-diagonal engraved lines-open pendant triangle	-	1	1
horizontal-vertical engraved lines-rectilinear el. (Barkman Engraved)	2	-	2
horizontal engraved lines-vertical excised column (Simms Engraved)	1	-	1
closely-spaced opposed engraved lines	-	1	1
opposed engraved lines	-	17	17
parallel engraved lines	-	32	32
widely-spaced parallel engraved lines	-	2	2

Table 33. Grog-tempered decorated sherds and decorated elements in Zone H, cont.

Decorative method and element	Rim	Body	N
parallel and diagonal engraved lines	-	4	4
parallel engraved lines-cross-hatched zone	-	2	2
parallel engraved lines-hatched zone	-	3	3
parallel engraved lines-vertical hatched zone	-	1	1
parallel engraved lines-hatched triangle el.	-	1	1
parallel-opposed engraved lines	-	1	1
parallel excised zone/zones	-	2	2
rectilinear engraved el. (Barkman Engraved)	2	5	7
rectilinear engraved line	-	2	2
rectilinear engraved lines-rectilinear hatched zones (Barkman Engraved)	-	2	2
straight engraved line	-	22	22
straight engraved line-narrow cross-hatched zone	-	1	1
straight engraved line-curvilinear hatched zone	-	1	1
straight engraved line-vertical hatched zone	-	1	1
straight engraved line-sets of curvilinear engraved lines	-	1	1
straight-diagonal engraved lines	-	2	2
straight engraved line-vertical excised column	-	1	1
straight excised zone	-	1	1
straight engraved line-rectilinear excised zone (Barkman Engraved)	-	1	1
vertical engraved lines	2	2	4
vertical curvilinear engraved line-excised vertical column	-	1	1
vertical engraved lines-hatched vertical columns	-	1	1
vertical curvilinear engraved lines in panel/zone (Hatchel Engraved)	-	13	13
vertical-diagonal engraved lines	1	-	1
sets of curvilinear engraved lines-curvilinear lines with tick marks (Glassell Engraved)	1	1	2
curvilinear engraved lines with diagonal tick marks	-	1	1
curvilinear engraved lines, one with tick marks	-	1	1
opposed curvilinear engraved lines with tick marks-zone with excised punctations (Barkman Engraved)	-	1	1
diagonal engraved lines with tick marks (Means Engraved)	2	-	2
1+ horizontal engraved line-tick marks	-	10	10
horizontal engraved line-diagonal tick marks	-	1	1
horizontal engraved lines-one line with tick marks (Barkman Engraved)	1	1	2
1+ horizontal engraved line with tick marks-narrow cross- hatched zone	-	2	2

Table 33. Grog-tempered decorated sherds and decorated elements in Zone H, cont.

Decorative method and element	Rim	Body	N
horizontal-diagonal engraved lines-one horizontal line with tick marks (Barkman Engraved)	-	2	2
horizontal-diagonal engraved lines-one line with tick marks-hatched triangle el. (Barkman Engraved)	-	1	1
1+ horizontal engraved line with tick marks-narrow vertical hatched zone (Barkman Engraved)	1	1	2
horizontal scroll-vertical bracket el.-hatched scroll fill zones-lower scroll fill zone line with tick marks (Barkman Engraved)	4	-	4
horizontal-vertical engraved lines-tick marks on horizontal line (Simms Engraved)	-	2	2
horizontal engraved lines-sets of vertical engraved lines-diagonal engraved line with tick marks-lip notched (Simms Engraved)	1	-	1
horizontal engraved lines, one with tick marks-vertical bracket el.-circle el. with excised central dot (Simms Engraved)	-	1	1
horizontal engraved line-vertical bracket el.-slanting scroll lines (one with tick marks)-hatched scroll fill zones (Barkman Engraved)	1	-	1
opposed-straight engraved lines, opposed line with tick marks	-	1	1
closely-spaced parallel engraved lines-tick marks on outer lines	-	1	1
parallel engraved lines, one with tick marks	-	1	1
diagonal tick marks	-	3	3
row of tick marks above carina	-	1	1
cross-hatched scroll fill zone/zones	1	1	2
curvilinear hatched scroll fill zone	-	4	4
diagonal-vertical hatched scroll fill zone	-	1	1
hatched scroll fill zone	-	4	4
hatched scroll fill zone and vertical hatched bracket el.	-	1	1
scroll fill zone with excised triangle and rectangular el.	-	1	1
horizontal engraved lines-curvilinear hatched scroll fill zone	2	-	2
horizontal engraved lines above stacked vertical hatched scroll fill zones and negative circle el. (Hempstead Engraved)	1	-	1
horizontal engraved line-horizontal hatched vertical zones-hatched upper and lower scroll fill zones	1	-	1
horizontal scroll line-scroll fill zone-horizontal-vertical engraved lines	1	1	2
horizontal-vertical engraved lines and curvilinear scroll fill zone	-	1	1
horizontal engraved lines-vertical curvilinear line-horizontal scroll line with vertical hatched bracket (Simms Engraved)	1	-	1

Table 33. Grog-tempered decorated sherds and decorated elements in Zone H, cont.

Decorative method and element	Rim	Body	N
horizontal-vertical engraved lines-horizontal scroll line with set of vertical engraved lines	1	-	1
sets of vertical hatched scroll fill zone	-	2	2
vertical engraved scroll fill zone	-	1	1
vertical hatched scroll fill zone and rectilinear el.	1	-	1
vertical hatched scroll fill zone	2	-	2
vertical hatched scroll fill zone and negative circle el. (Hempstead Engraved)	-	1	1
slanted scroll line-cross-hatched scroll fill zone (Barkman Engraved)	1	1	2
slanted scroll line-curvilinear hatched fill zone (Barkman Engraved)	1	1	2
slanted scroll line-hatched scroll fill zone (Barkman Engraved)	2	3	5
slanted scroll line and vertical hatched scroll fill zone (Barkman Engraved)	1	-	1
slanted scroll line-vertical hatched fill zones (Barkman Engraved)	-	1	1
slanted scroll line-vertical hatched scroll fill zones-vertical curvilinear dividers (Barkman Engraved)	1	-	1
slanted scroll lines-stacked vertical hatched scroll fill zone (Barkman Engraved)	1	-	1
zig-zag engraved scroll line and scroll fill zone	-	1	1
<i>Engraved-Appliqued (Hatchel Engraved)</i>			
curvilinear engraved lines-appliqued ridge	-	1	1
diagonal engraved lines-parallel appliqued ridges	-	1	1
diagonal engraved line-short and straight appliqued ridge	-	1	1
diagonal opposed engraved lines-straight appliqued ridge	-	1	1
parallel engraved lines-diagonal hatched zone-appliqued nodes between engraved lines	-	1	1
multiple vertical curvilinear engraved lines-straight appliqued ridge	-	4	4
<i>Engraved-Punctated</i>			
engraved bracket el. filled with excised punctations	-	1	1
cross-hatched engraved bracket el.-excised punctated row (Simms Engraved)	-	1	1
curvilinear engraved lines with excised dashed punctations between lines (Belcher Engraved, var. <i>Soda Lake</i>)	-	4	4
curvilinear engraved lines-vertical zone with excised punctations	-	1	1
curvilinear engraved line-horizontal scroll line-scroll fill zone-vertical and horizontal excised punctated rows (Barkman Engraved)	1	-	1

Table 33. Grog-tempered decorated sherds and decorated elements in Zone H, cont.

Decorative method and element	Rim	Body	N
diagonal engraved zone with rows of excised punctations	-	1	1
diagonal opposed excised lines-diagonal excised punctated row	-	1	1
hatched engraved zone-adjacent row of excised punctations	-	1	1
horizontal engraved lines with excised punctated row between (Belcher Engraved)	8	10	18
horizontal engraved lines with excised punctated rows between two lines (Barkman Engraved)	-	1	1
horizontal engraved lines with two closely-spaced excised punctated rows	-	1	1
horizontal engraved lines-excised punctated row below lip (Belcher Engraved)	1	-	1
horizontal engraved line above 2 excised punctated rows (Barkman Engraved)	-	1	1
horizontal engraved line/lines above excised punctated row	2	9	11
horizontal engraved lines-cross-hatched bracket el.-cross- hatched scroll fill zone-scroll line of excised punctations (Belcher Engraved)	1	-	1
horizontal engraved lines-cross-hatched scroll fill zones- slanted scroll line of excised punctations	2	-	2
horizontal engraved line-cross-hatched bracket el.-rows of excised punctations (Belcher Engraved)	-	1	1
horizontal engraved line-narrow vertical hatched zone—row of excised punctations between	-	1	1
horizontal engraved lines-one with tick marks-vertical hatched horizontal zone-row of excised punctations (Barkman Engraved)	1	-	1
horizontal engraved lines—one with tick marks-narrow vertical hatched horizontal row-2 rows of excised punctations between engraved lines (Barkman Engraved)	1	-	1
horizontal engraved line with tick marks-vertical hatched columns-vertical and horizontal excised punctated rows (Barkman Engraved)	-	1	1
horizontal engraved lines-vertical curvilinear line-excised punctated row (Barkman Engraved)	-	2	2
horizontal engraved lines-vertical curvilinear lines-cross- hatched bracket el.-excised punctated row (Simms Engraved)	1	-	1
horizontal engraved lines-diagonal engraved zone with excised punctations (Barkman Engraved)	3	-	3

Table 33. Grog-tempered decorated sherds and decorated elements in Zone H, cont.

Decorative method and element	Rim	Body	N
horizontal-diagonal engraved lines, diagonal line dividing rows of excised punctations (Barkman Engraved)	-	1	1
horizontal-diagonal engraved lines—two horizontal lines with tick marks-diagonal lines dividing row of excised punctations (Barkman Engraved)	1	-	1
horizontal-diagonal engraved lines, with diagonal line dividing rows of excised punctations-excised punctated row beneath the lip (Belcher Engraved)	1	-	1
horizontal-diagonal-curvilinear engraved lines with excised punctated row between	-	1	1
horizontal engraved lines-hatched vertical columns-excised punctated rows (Barkman Engraved)	-	2	2
horizontal-triangular engraved lines above excised punctated row	-	1	1
horizontal-vertical engraved lines-excised punctated row- hatched scroll fill zone (Simms Engraved)	-	1	1
horizontal-vertical engraved lines-vertical hatched zone-excised punctated row between horizontal line-hatched zone	-	2	2
horizontal-vertical engraved lines-zone with excised punctated row (Barkman Engraved)	1	-	1
horizontal-vertical engraved lines-excised punctated rows between horizontal lines	-	2	2
horizontal-vertical engraved lines with excised punctated rows between vertical engraved lines	-	1	1
horizontal-vertical engraved lines-horizontal zone with row of excised dash marks (Belcher Engraved)	1	-	1
horizontal-vertical engraved lines-diagonal hatched zone-row of excised punctations (Barkman Engraved)	-	1	1
horizontal engraved line with tick marks-vertical hatched zone-excised punctated row between line and zone (Barkman Engraved)	-	1	1
horizontal engraved lines-tick marks-excised punctated rows (Barkman Engraved)	1	1	2
horizontal engraved lines-one with tick marks-excised punctated row between lines (Barkman Engraved)	-	3	3
parallel engraved lines-excised punctated row	-	1	1
parallel engraved lines-excised dash marks between the lines	-	3	3
straight engraved line and excised punctated row	-	3	3
sets of vertical engraved lines-excised punctated row between	-	2	2

Table 33. Grog-tempered decorated sherds and decorated elements in Zone H, cont.

Decorative method and element	Rim	Body	N
vertical engraved panel filled with horizontal-vertical rows of excised punctations-hatched triangle el. (Barkman Engraved)	-	1	1
<i>Engraved-Punctated-Appliqued (Belcher Engraved)</i>			
horizontal-diagonal engraved lines-diagonal lines dividing rows of excised punctations-circular applique node and sets of vertical curvilinear engraved lines-row of excised punctations below the lip	1	-	1
<i>Engraved-Red-Slipped</i>			
circular engraved el. with semi-circle-parallel engraved lines within (Bowie Engraved)	-	1	1
curvilinear engraved line-int. red-slipped	-	1	1
curvilinear engraved lines-excised bracket el.-int./ext. red-slipped	-	1	1
curvilinear engraved line-excised triangle el.-ext. red-slipped	-	1	1
1+ horizontal engraved line-int./ext. red-slipped	-	2	2
1-2+ widely-spaced horizontal engraved lines-int./ext. red-slipped	7	9	16
interior vessel surface horizontal engraved line-int./ext. red-slipped (Bowie Engraved)	1	-	1
parallel-opposed engraved lines-int./ext. red-slipped	-	1	1
vertical hatched zone-int./ext. red-slipped	1	-	1
<i>Excised Punctated</i>			
horizontal row of excised punctations	-	2	2
linear excised punctated row	-	1	1
row of excised punctations	-	5	5
2+ rows of excised punctations	-	1	1
<i>Painted (see Appendix 3)</i>			
red-white painted sherd (bottle)	-	1	1
<i>Red-Slipped</i>			
ext. red-slipped	-	8	8
int. red-slipped	-	3	3
int./ext. red-slipped	3	50	53
<i>Trailed (Keno Trailed)</i>			
multiple curvilinear trailed lines	-	3	3
opposed curvilinear trailed lines	-	1	1
1+ horizontal trailed line	1	1	2
Totals	327	1265	1592

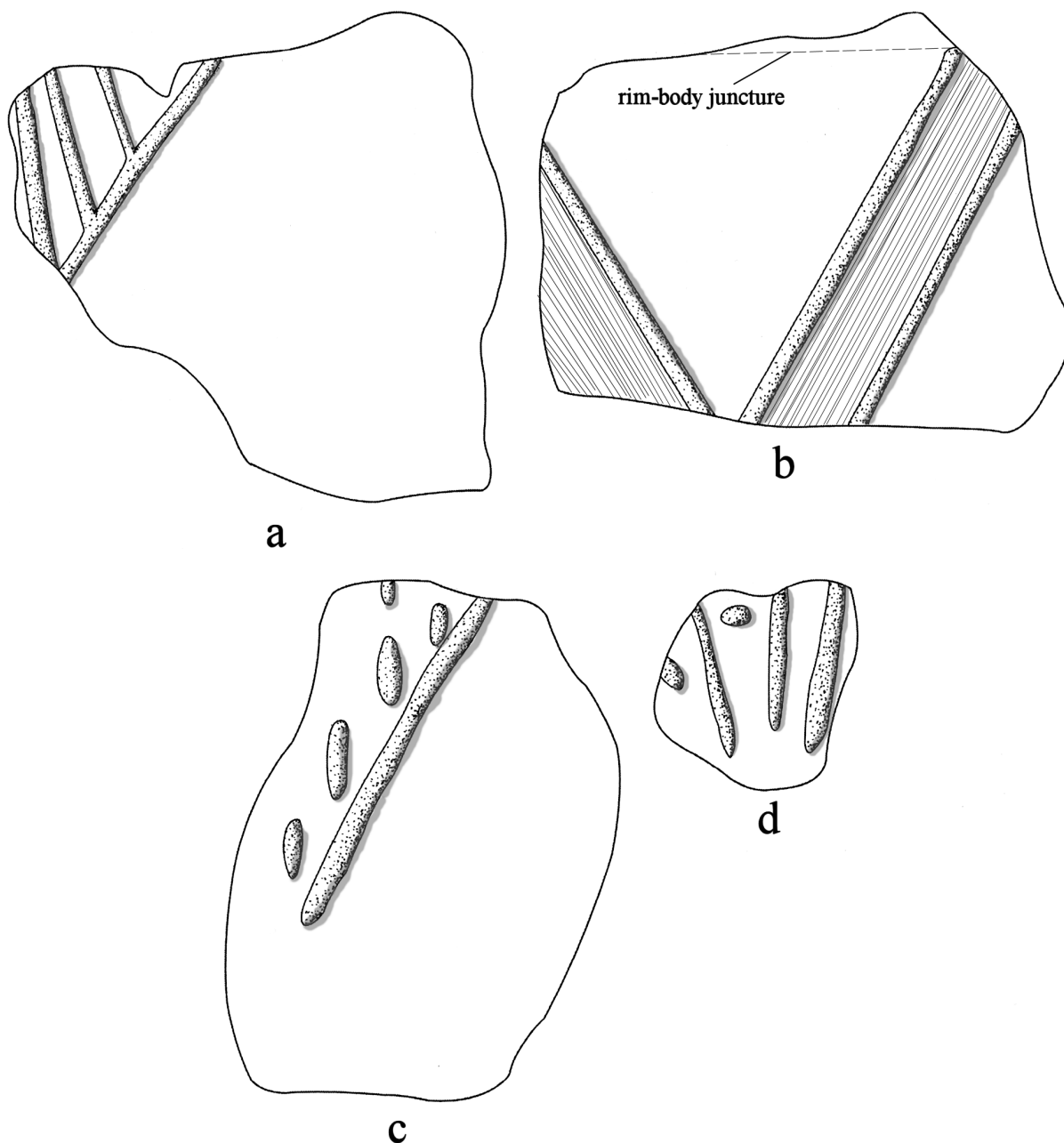


Figure 86. Selected grog-tempered applied and applied-brushed sherds in Zone H in the Hatchel platform mound.

either horizontal brushed marks in association with vertical rows of applied nodes or applied ridges, or have vertical brushing marks and vertical applied ridges. Brushing on vessel bodies are diagonal, parallel, or vertical in orientation, and most of these sherds are from Pease Brushed-Incised vessels. One body sherd has diagonal opposed applied ridges with diagonal brushing marks between the ridges (see Figure 86b). The few brushed-applied-incised rim sherds have horizontal brushed marks, vertical applied nodes or ridges, but also a single horizontal incised line at the rim-body juncture (see Table 33). The one brushed-applied-punctated body sherd in this Zone H assemblage has a tool punctated row adjacent to a straight applied ridge and an area of the vessel body with parallel brushing marks.

The grog-tempered brushed-incised rim sherds in Zone H have horizontal brushed marks and overlying vertical incised lines. Brushed-incised body sherds from Karnack Brushed-Incised vessels in the assemblage have diagonal, horizontal, parallel, and vertical decorative elements (see Table 33). The few brushed-punctated body sherds have a tool punctated row at the rim-body juncture of jars, with diagonal or vertical brushing marks on the vessel body and horizontal brushing on the rim.

Among the grog-tempered sherds from incised vessels in Zone H are rim sherds with opposed curvilinear, diagonal, and zones of diagonal opposed incised lines divided by a horizontal incised line (Figure 87d); this rim is from a Foster Trailed-Incised, *var. unspecified* vessel. Other Foster Trailed-Incised, *var. Foster* rim and body sherds have sets of short diagonal incised lines (Figure 88a) on the rim as well as zones with short diagonal incised lines (Figure 88c).

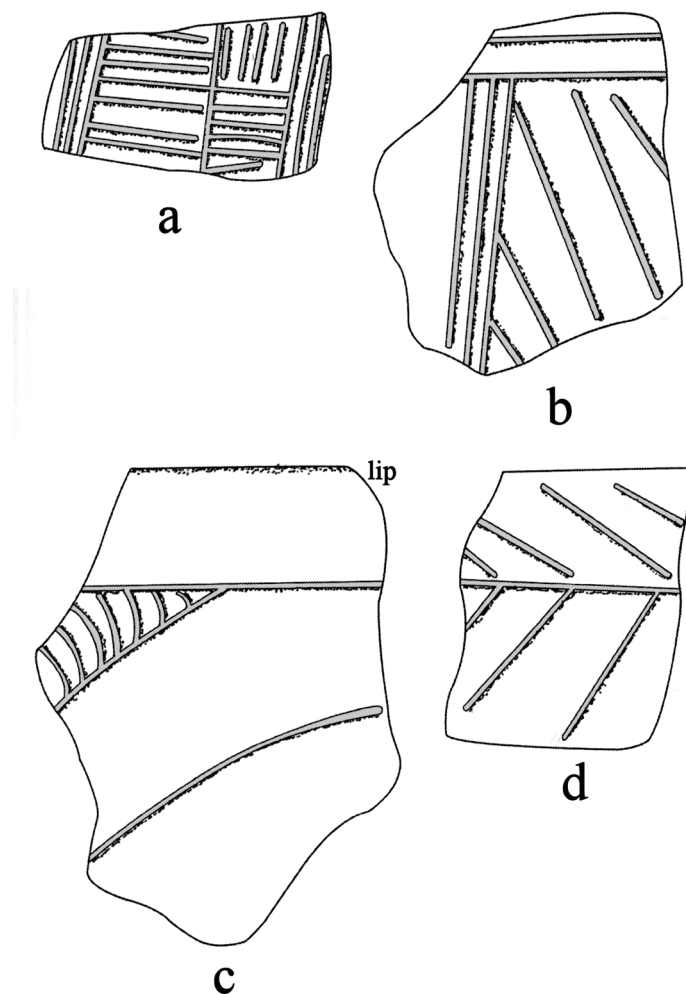


Figure 87. Grog-tempered and grog-bone-tempered incised utility ware sherds from Zone H in the Hatchel site platform mound.

Other rim sherds with incised decorative elements have horizontal (at least 1-10 incised lines), horizontal-cross-hatched, horizontal-diagonal, horizontal-vertical incised lines, and closely-spaced vertical incised lines (see Table 33). One Crockett Curvilinear Incised rim (see Figure 87c) has a slanted scroll line and curvilinear hatched scroll fill zones. Two other Crockett Curvilinear Incised carinated bowl lower rim sherds from Zone H have curvilinear and circular incised zones filled

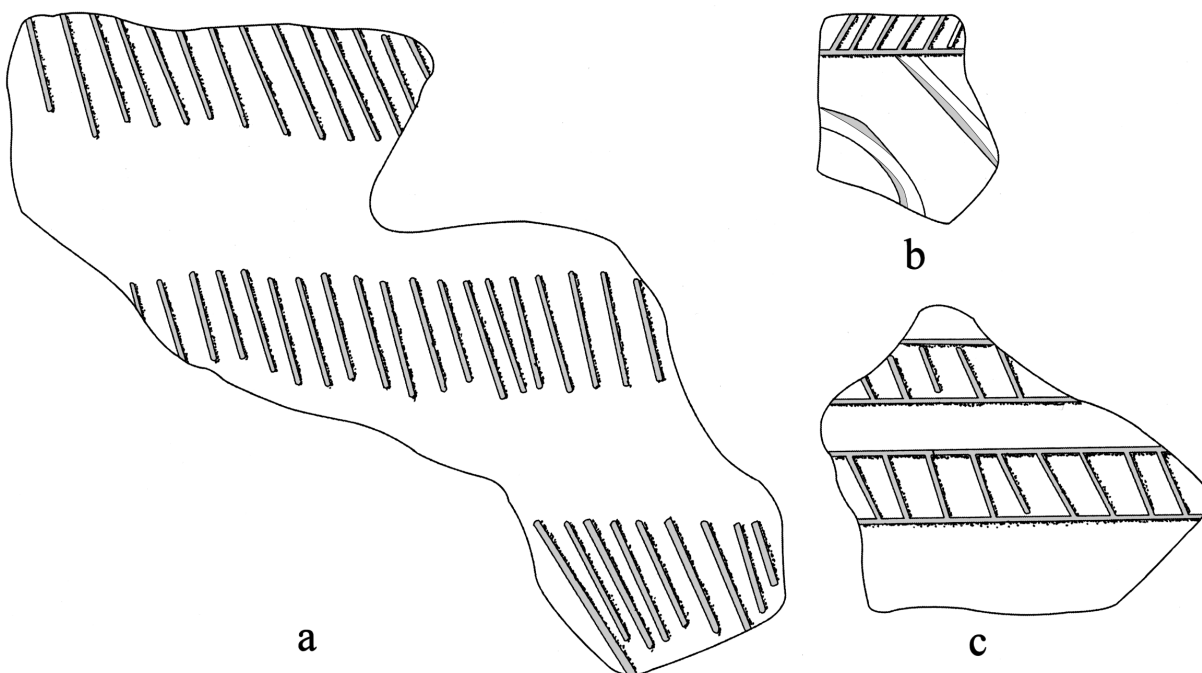


Figure 88. Foster Trailed-Incised grog-tempered body sherds from Zone H in the Hatchel site platform mound.

with cane punctations (Figure 89e), and another Crockett vessel has diagonal opposed incised lines, triangle elements filled with curvilinear hatched lines, and a central incised circle filled with small circular punctations.

Only a few of the grog-tempered incised body sherds in Zone H have curvilinear or cross-hatched incised lines. The design elements are predominantly simple geometric elements, including a Pease Brushed-Incised sherd with vertical, diagonal, and horizontal incised lines (see Figure 87b).

Incised-punctated rim sherds from grog-tempered vessels in Zone H have horizontal incised lines with tool punctated rows beneath the vessel lip or have horizontal incised lines with incised triangle zones filled with tool punctations (see Table 33). Body sherds have curvilinear incised zones with a range of tool punctated forms (see Figure 89b, g), or a row of fingernail punctations between parallel (or horizontal) incised lines (see Figure 89d). The range of punctation types used on the incised-punctated vessels include cane ($n=3$, 8 percent), circular ($n=2$, 5 percent, see Figure 89c), fingernail ($n=3$, 8 percent), and tool ($n=29$, 78 percent).

Other grog-tempered utility wares in Zone H include Nash Neck Banded rim and body sherds ($n=41$, 6.0 percent of the grog-tempered utility wares). These include rim sherds with applied ridge elements on the rim as well as the vessel body, or rim sherds with short vertical incised lines under the lip and above the neck bands (see Table 33). Grog-tempered punctated utility wares in this zone have rows of cane ($n=1$), fingernail ($n=8$), and tool punctated ($n=20$) rows on the rim and vessel body.

There are also grog-tempered body sherds from Belcher Ridged, *var. Belcher*, *var. Bryam's Ferry*, and *var. unspecified* vessels; together, these account for 9.8 percent of the grog-tempered

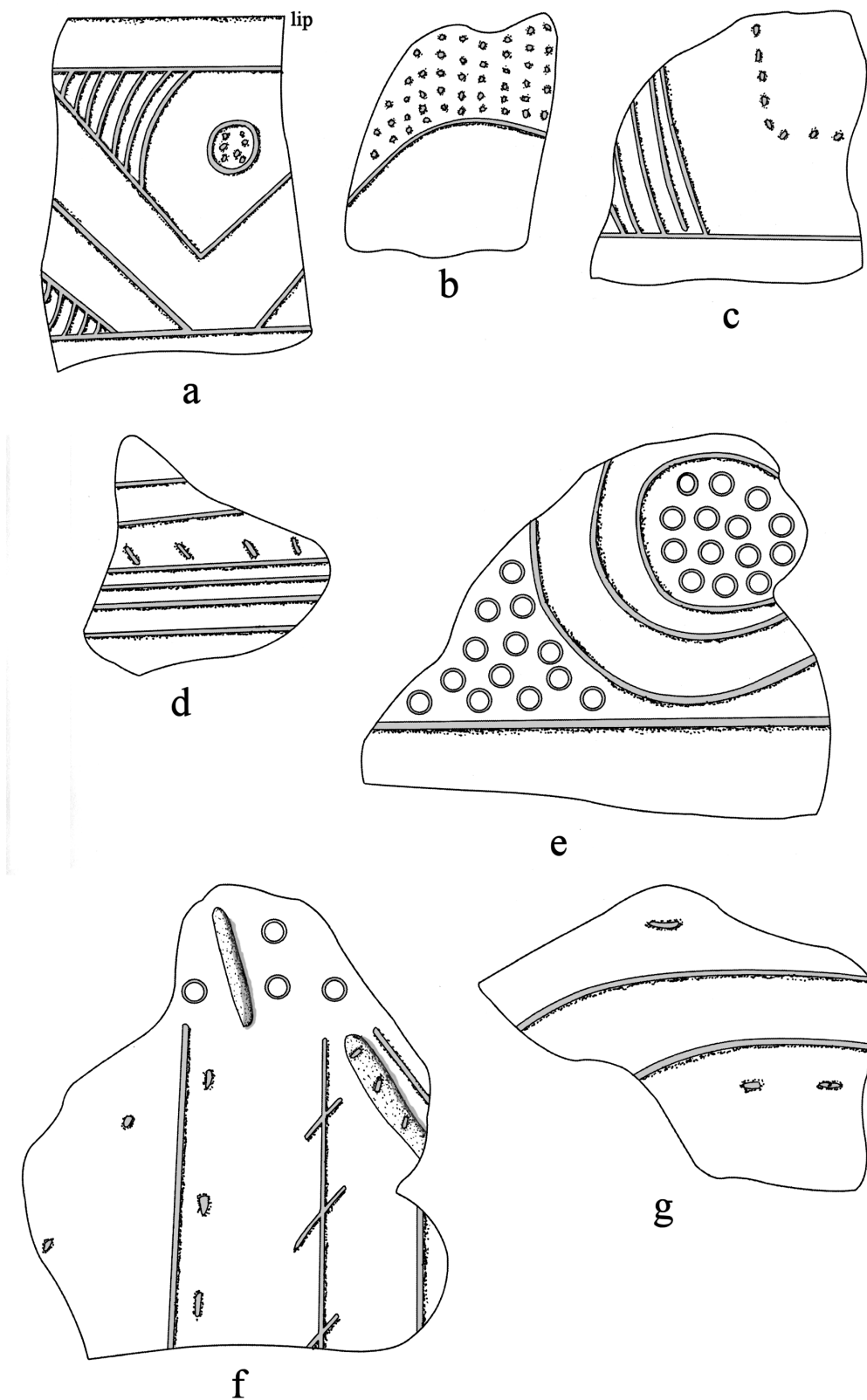


Figure 89. Grog-tempered, grog-bone-tempered, and shell-tempered incised-punctated and incised-punctated-applied rim and body sherds from Zone H in the Hatchel site platform mound.

utility ware sherds in Zone H. The var. unspecified sherds have parallel incised lines between the parallel ridges, perhaps simulating the brushing marks noted on Belcher Engraved, var. *Bryam's Ferry* sherds.

About 7.2 percent of the grog-tempered utility ware sherds in Zone H are from McKinney Plain vessels with roughened exterior surfaces (see Table 33). Three rim sherds are from McKinney Applied vessels with applied ridges or nodes below the vessel lip and roughened surfaces below the applied elements.

Rim and body sherds from grog-tempered Foster Trailed-Incised vessels with trailed (n=18) or trailed-incised (n=3) decorative elements represent about 3 percent of the utility ware sherds in Zone H (see Table 33). These are from var. *Foster* and var. *Dobson* vessels. Among the Foster Trailed-Incised sherds from Zone H is a grog-tempered body sherd from a Foster Trailed-Incised, var. *Dobson* vessel with a diagonal incised zone on the lower rim above diagonal and curvilinear trailed lines on the vessel body (see Figure 88b).

The grog-tempered fine ware sherds in Zone H include sherds from vessels with engraved (n=705, 77 percent of these Zone H fine wares, including 81 percent of the fine ware rim sherds), engraved-applied (n=9, 1.0 percent), engraved-punctated (n=91, 10 percent), engraved-punctated-applied (n=1, trace), engraved-red-slipped (n=25, 2.7 percent), excised punctated (n=9, 1.0 percent), painted (n=1, trace), red-slipped (n=64, 7.0 percent), and trailed (n=6, 0.1 percent) (see Table 33). The proportion of grog-tempered fine ware sherds that have a red slip on one or both vessel surfaces in Zone H is 9.8 percent (n=89).

Eight of the nine grog-tempered sherds from Zone H with engraved-applied decorative elements are from Hatchel Engraved bottles (Figure 90a-c). Another body sherd has parallel engraved lines, a diagonal hatched zone, and applied nodes between engraved lines (Figure 90d).

The identified engraved and engraved-punctated grog-tempered fine ware sherds in Zone H are primarily from Barkman Engraved (n=70, Figures 91a, d, 92a-e, 93a-b, 94d, 95a, 96a-b, e-f), Belcher Engraved, var. *Belcher* and var. *Soda Lake* (n=28, Figures 91b, 94a-c, f-g), and Simms Engraved (n=15, Figures 91c, e, 93d, and 96c) vessels; at least one Simms Engraved vessel is lip notched. Several of the Barkman Engraved vessels have slanted scroll elements (sometimes with slanted ticked lines or slanted excised punctated rows) included in Barkman Engraved, var. *Clear Lake* vessels (Figure 92a-e).

Less common grog-tempered fine wares in Zone H include sherds from Avery Engraved (see Figure 95c-e), Glassell Engraved (see Figure 93e and Figure 96h), Hatchel Engraved (see Figure 93f and 95b), and Means Engraved (see Figure 93c, a Ouachita River basin fine ware). Eight sherds are from distinctive Bowie Engraved vessels with triangular and circular element bands (Figure 97a-d).

A few of the grog-tempered fine ware sherds in Zone H are from ceramic types made and used in Middle Caddo period times along the Red River and in southwestern Arkansas sites. These include Haley Engraved bottle sherds (n=4, Figure 98a-b) and Hempstead Engraved (n=2) carinated bowl sherds (Figure 98c).

Several of the engraved-red-slipped grog-tempered vessel sherds in Zone H are from Bowie Engraved vessels (see Table 33), including one sherd with an interior engraved line, while others

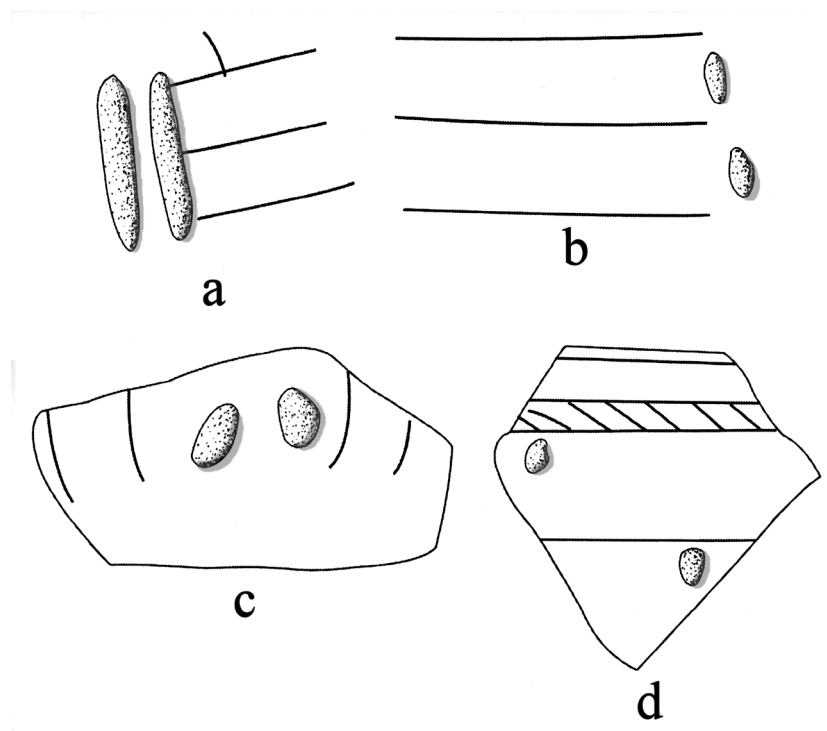


Figure 90. Grog-tempered engraved-applied body sherds from Zone H in the Hatchel site platform mound.

have horizontal engraved and vertical hatched zones on rims. More than 82 percent of the sherds with slipped surfaces have a red slip on both interior and exterior vessel surfaces, including three rims; these vessels are not solely the undecorated portions of red-slipped engraved vessels.

Approximately 6.3 percent of the grog-tempered engraved sherds in Zone H have excised tick marks (see Table 33). These tick marks are present on Barkman Engraved (see Figures 91a, d, 92a-c, and 93b), Belcher Engraved (see Figures 91b and 94e), Glassell Engraved (see Figures 93e and 96h), Means Engraved (see Figure 93c), and Simms Engraved (see Figures 91e, and 93d) vessels.

The remaining grog-tempered fine ware sherds in Zone H are from Keno Trailed, *var. unspecified* vessels (see Table 33). These sherds comprise only 9.7 percent of these fine wares.

Approximately 53 percent of the grog-bone-tempered decorated sherds in Zone H are from utility ware vessels (Table 34). This includes sherds with appliqué (n=10, 16.1 percent of these utility ware), brushed (n=9, 14.5 percent), incised (n=11, 17.7 percent), and trailed (n=6, 9.7 percent) elements.

The grog-bone-tempered appliqué and appliqué-incised rim and body sherds in Zone H have nodes or vertical appliqué ridges, including two body sherds with incised lines either adjacent to or between appliqué ridges (see Table 34). These sherds are likely from Nash Neck Banded and McKinney Appliqué vessels.

In Zone H, the grog-bone-tempered sherds with brushed marks either have brushing as the sole decorative element or have associated appliqué (Pease Brushed-Incised), incised, or punctated

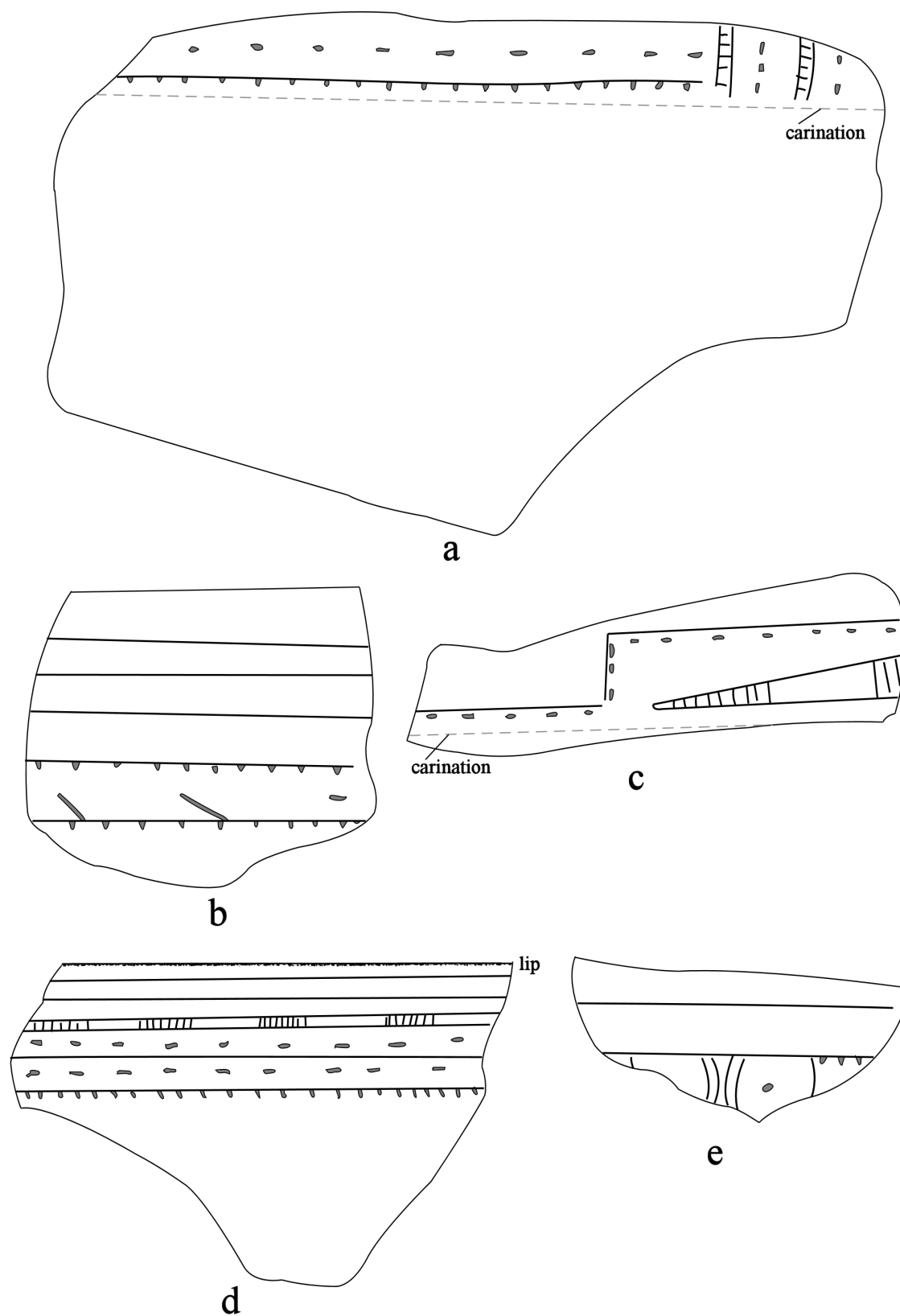


Figure 91. Decorative elements on selected grog-tempered Barkman Engraved, Belcher Engraved, and Simms Engraved sherds from Zone H in the Hatchel site platform mound.

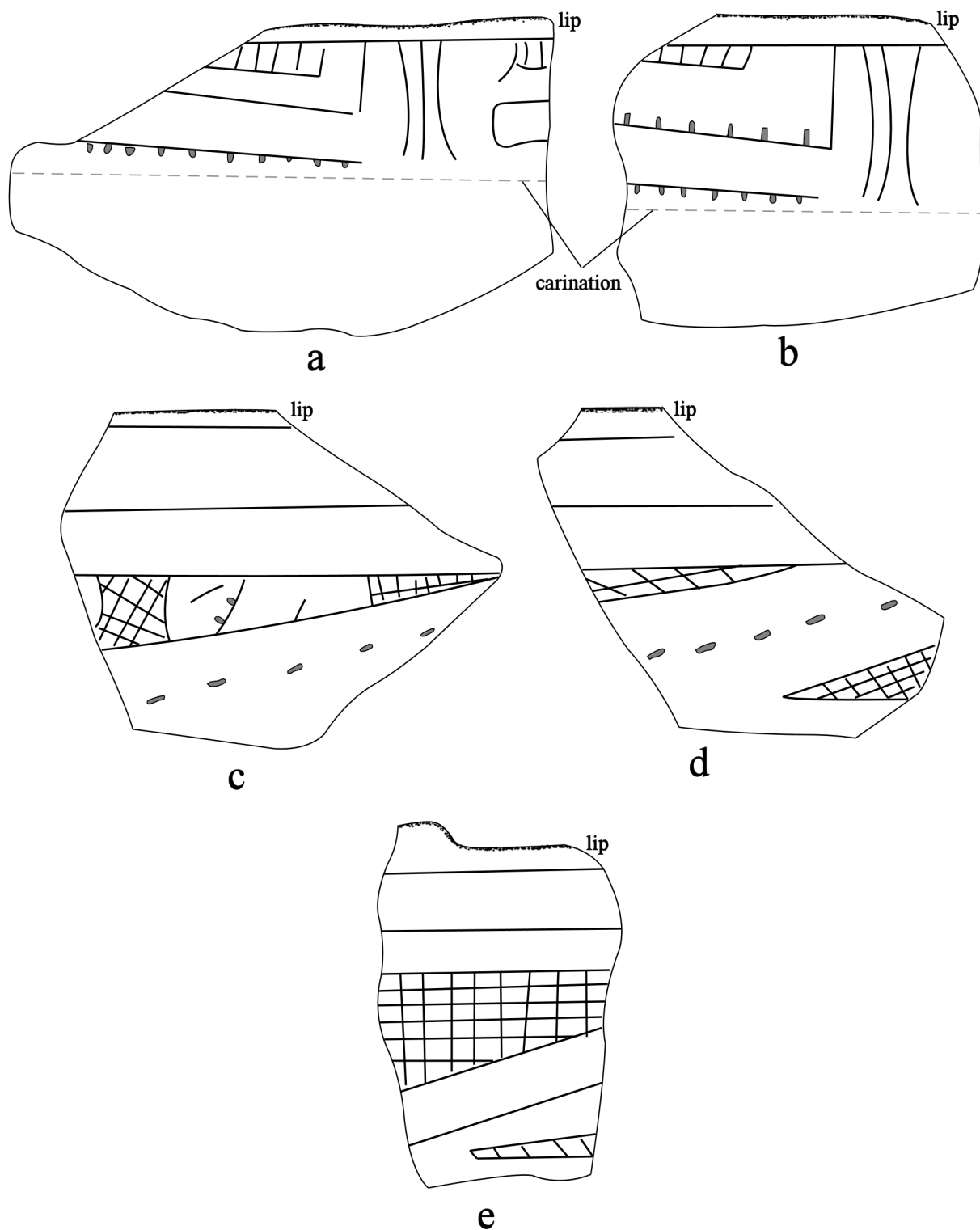


Figure 92. Decorative elements on Barkman Engraved, var. *Clear Lake* grog-tempered rim sherds from Zone H in the Hatchel site platform mound.

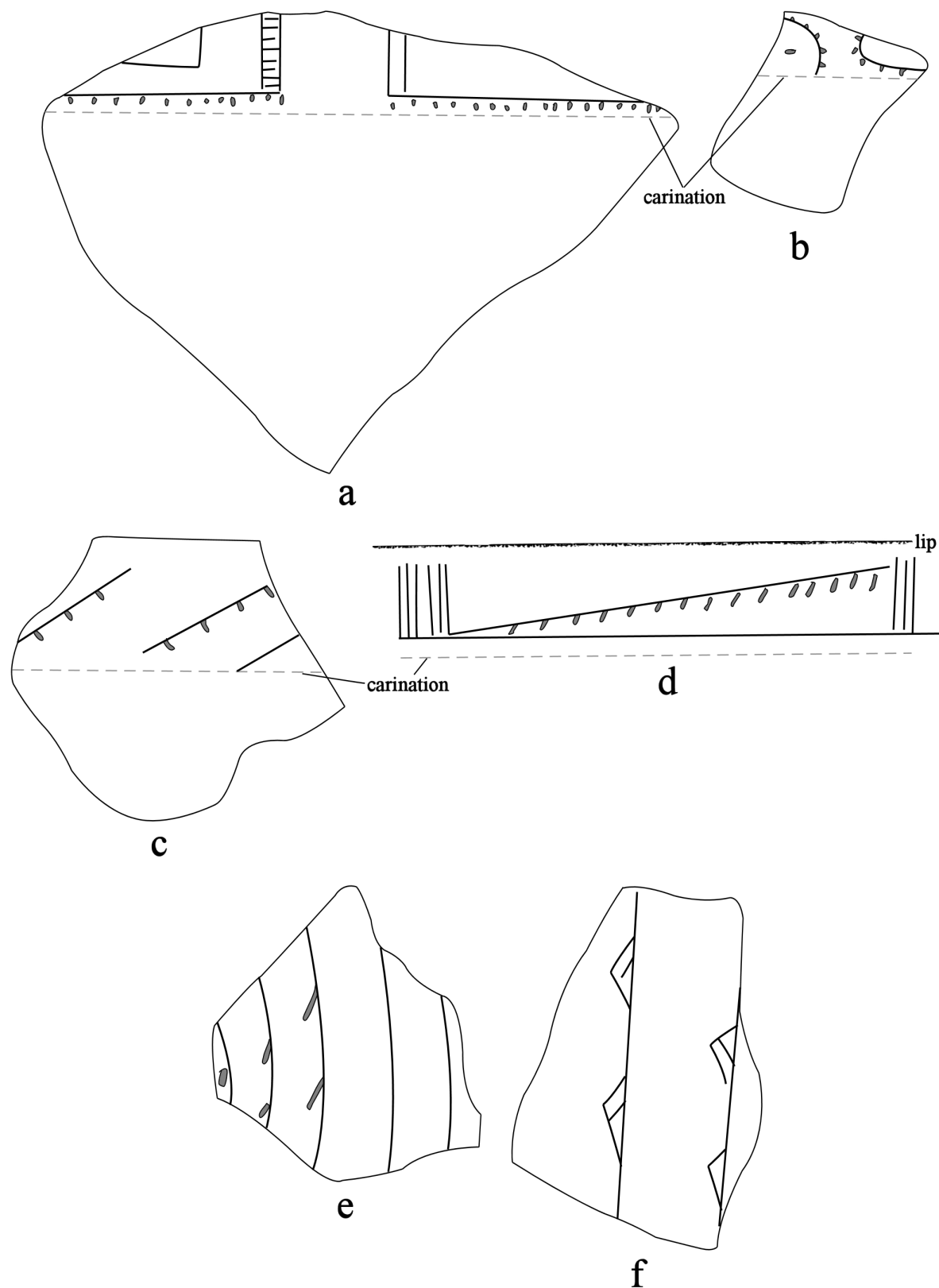


Figure 93. Decorative elements on selected grog-tempered Barkman Engraved, Glassell Engraved, Hatchel Engraved, Means Engraved, and Simms Engraved sherds from Zone H in the Hatchel site platform mound.

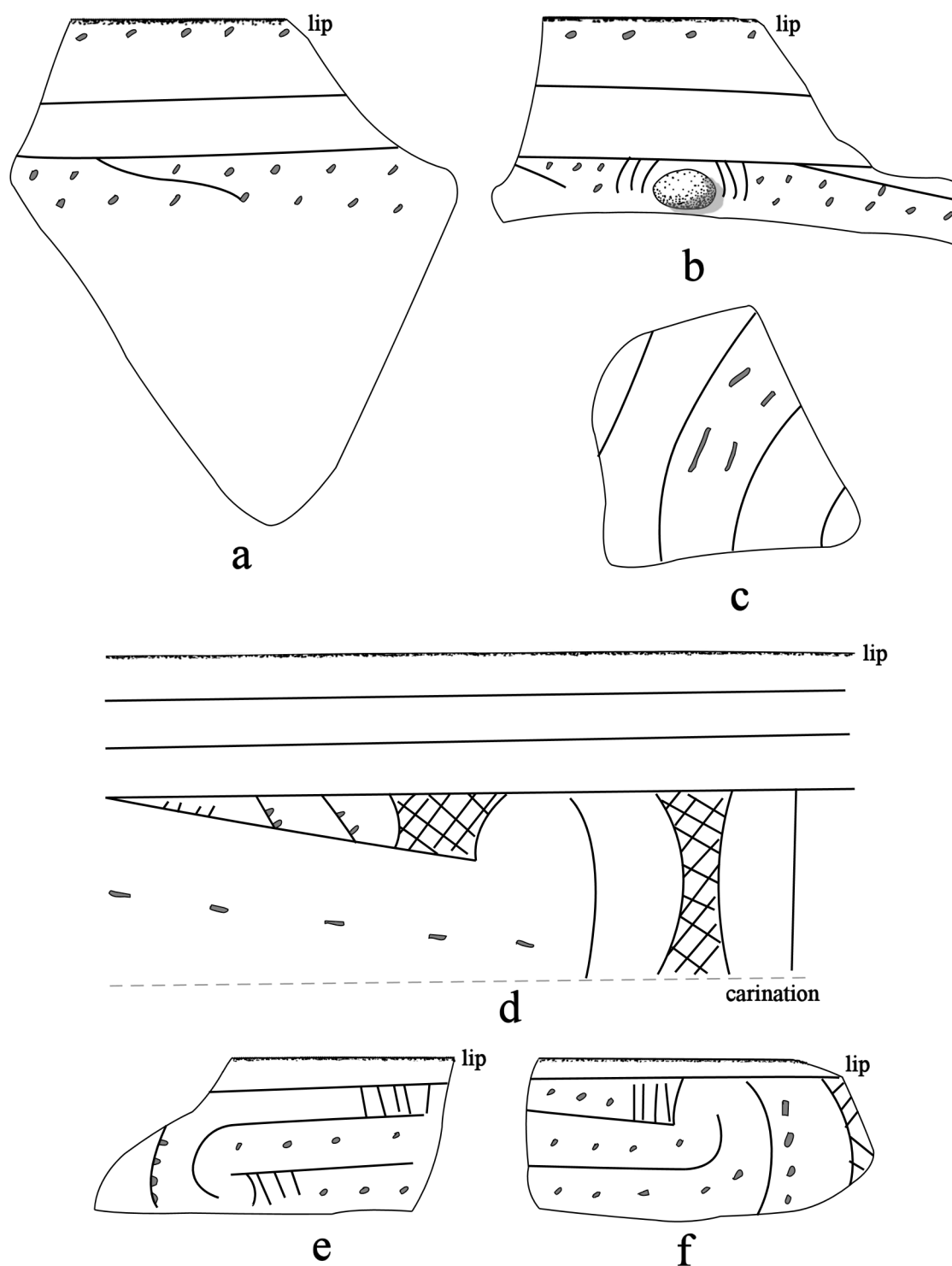


Figure 94. Decorative elements on selected grog-tempered and grog-bone-tempered Barkman Engraved and Belcher Engraved sherds from Zone H in the Hatchel site platform mound.

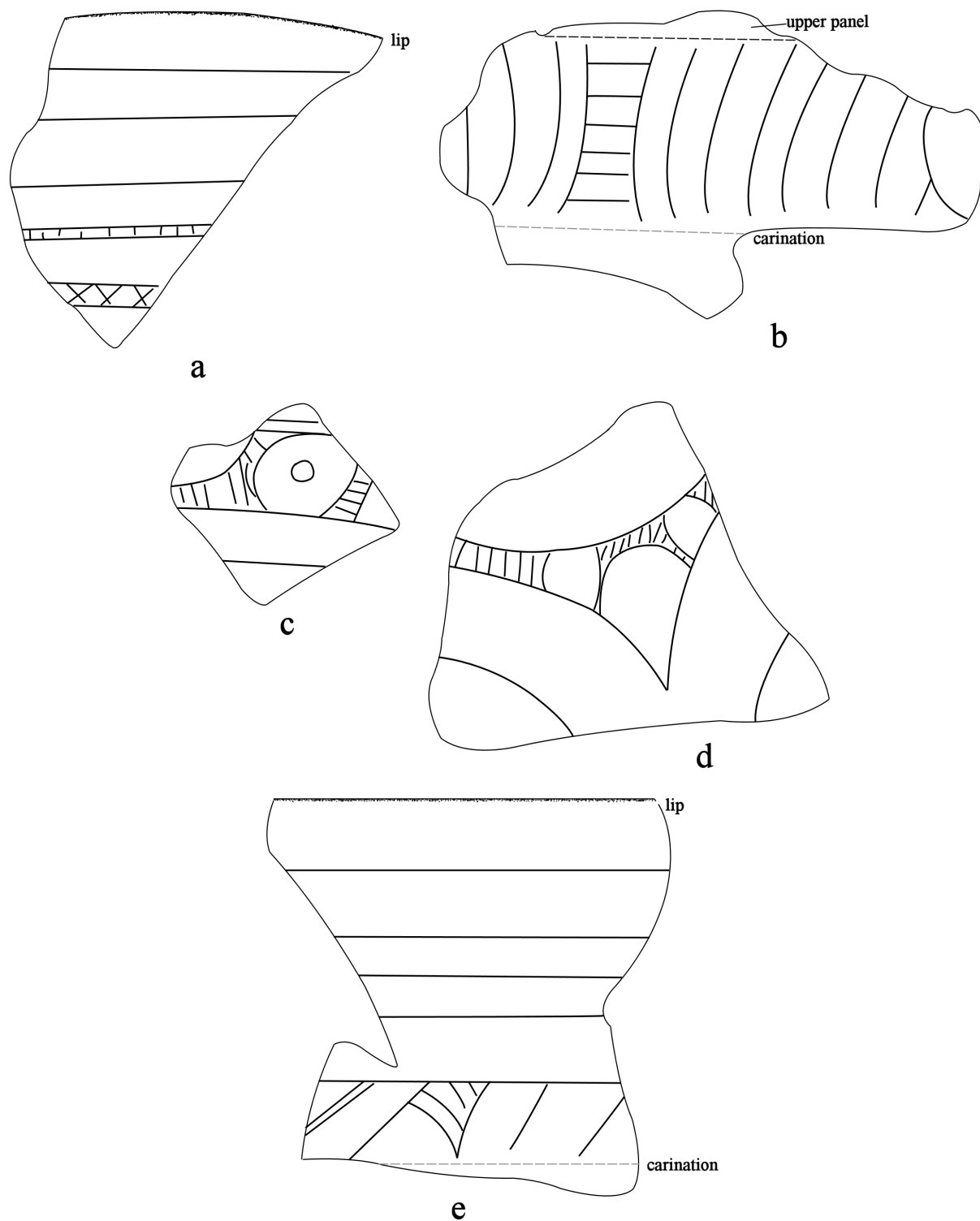


Figure 95. Decorative elements on selected grog-tempered Avery Engraved, Barkman Engraved, and Hatchel Engraved sherds from Zone H in the Hatchel site platform mound.

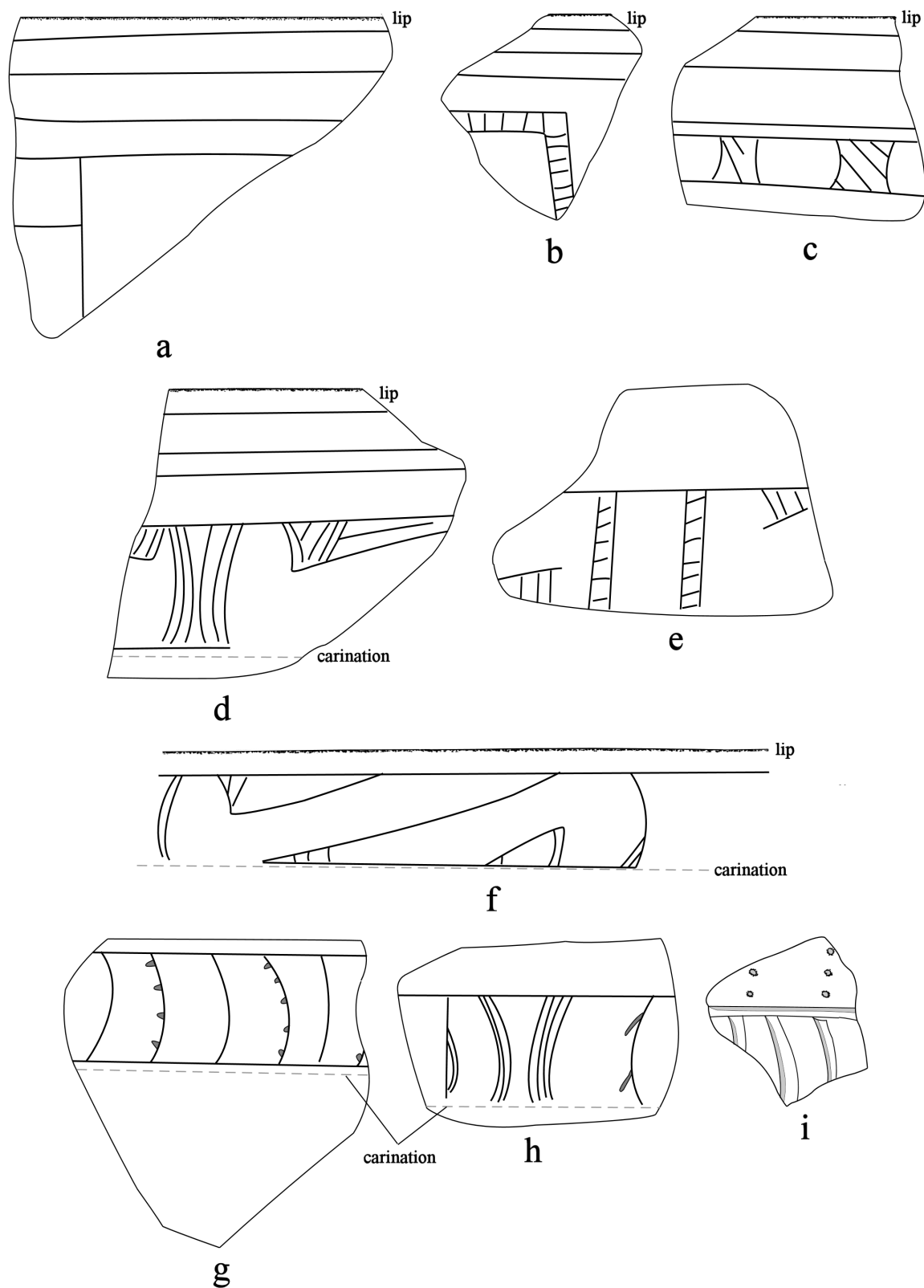


Figure 96. Decorative elements on selected grog-, grog-bone-, and shell-tempered Barkman Engraved, Glassell Engraved, Keno Trailed, and Simms Engraved sherds from Zone H in the Hatchel site platform mound.

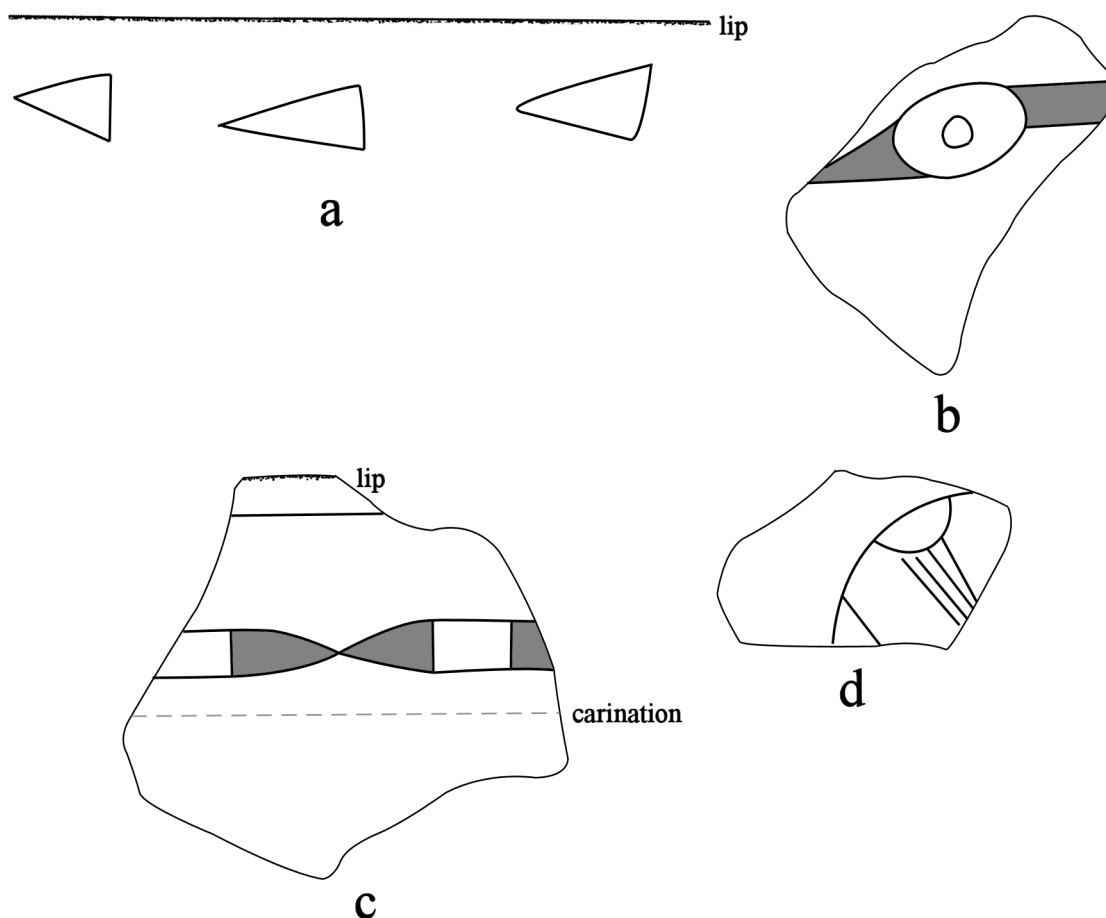


Figure 97. Decorative elements on selected grog-tempered Bowie Engraved rim and body sherds from Zone H in the Hatchel site platform mound.

elements. These sherds are from Karnack Brushed-Incised vessels. One rim has horizontal brushed marks with overlying vertical incised lines (see Table 34).

Among the grog-bone-tempered incised rim sherds are two with between one and four horizontal incised lines, a third rim with horizontal and diagonal lines, and a Foster Trilled-Incised, *var. Foster* rim with at least one set of short diagonal incised lines; two body sherds from *var. Foster* vessels have at least 2-3 sets of short diagonal incised lines. Body sherds have primarily simple geometric elements, although one sherd has curvilinear incised lines (see Table 34), and a Pease Brushed-Incised body sherd has sets of opposed incised lines (see Figure 87a).

Grog-bone-tempered sherds in Zone H with incised-punctated decorative elements comprise only 3.2 percent of the utility wares. The most distinctive is a Crockett Curvilinear Incised rim sherd with nested incised triangles, hatched triangular elements within the nested triangles, and a central incised circle filled with small circular punctations (see Figure 89a).

Other utility wares include body sherds from Nash Neck Banded vessels (n=3, 4.8 percent of the grog-bone-tempered utility wares in Zone H), rim and body sherds with cane, fingernail, or tool punctations (n=5, 8.1 percent), Belcher Ridged, *var. Belcher* and *var. Byram's Ferry* body sherds

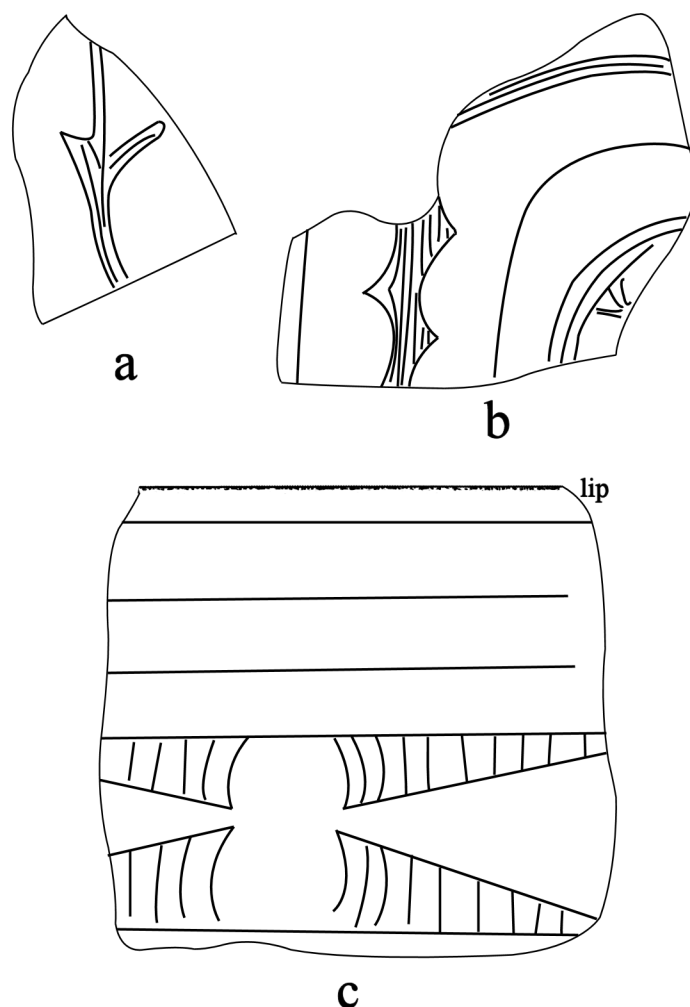


Figure 98. Decorative elements on selected grog-tempered Haley Engraved and Hempstead Engraved sherds from Zone H in the Hatchel site platform mound.

(n=4, 6.4 percent), and McKinney Plain, McKinney Applied, and McKinney Brushed rim sherds with roughened surfaces and applied or brushed decorative elements (n=5, 8.1 percent (see Table 34). There are also Foster Trailed-Incised, *var. unspecified* body sherds among the grog-bone-tempered utility wares in Zone H.

The grog-bone-tempered fine wares in Zone H include sherds with engraved (n=35, 62.5 percent), engraved-punctated (n=5, 8.9 percent), engraved-red-slipped (n=3, 5.4 percent), red-slipped (n=12, 21.4 percent), and red-slipped-appliqued (n=1, 1.8 percent) (see Table 34) elements. Including sherds with other decorative elements besides a red-slipped surface, notably 28.6 percent of the grog-bone-tempered fine wares in Zone H have a red slip on one or both vessel surfaces.

Engraved rim sherds from carinated bowls in this assemblage have a variety of decorative elements: horizontal, horizontal curvilinear, horizontal-diagonal, horizontal-curvilinear vertical with tick marks (see Figure 96g), horizontal lines above a curvilinear scroll fill zone and bracket dividers (see Figure 96d), and a scroll fill zone with sets of curvilinear engraved lines (see Table 34). Fine ware types represented in the engraved sherds from Zone H include Barkman Engraved and Glassell

Table 34. Grog-bone-tempered decorated sherds and decorated elements in Zone H.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Appliqued</i>			
appliqued node	1	-	1
straight appliqued ridge	-	8	8
vertical appliqued ridges	-	1	1
<i>Appliqued-Incised</i>			
parallel appliqued ridges-opposed incised lines	-	1	1
straight appliqued ridge-straight incised line	-	1	1
<i>Brushed</i>			
parallel brushed	-	8	8
vertical brushed	-	1	1
<i>Brushed-Appliqued</i>			
opposed brushed-straight appliqued ridge (Pease Brushed-Incised)	-	1	1
<i>Brushed-Incised</i>			
horizontal brushed-overlying vertical incised lines	1	-	1
parallel brushed-incised marks and lines	-	1	1
parallel and opposed brushed-incised marks and lines	-	1	1
<i>Brushed-Punctated</i>			
fingernail punctated rows and parallel brushing marks between rows	-	1	1
<i>Incised</i>			
curvilinear incised lines	-	1	1
1+ horizontal incised line	1	-	1
4+ horizontal incised lines	1	-	1
horizontal-diagonal incised lines	1	-	1
sets of opposed incised lines (Pease Brushed-Incised)	-	1	1
parallel incised lines	-	2	2
straight incised line	-	1	1
1+ set of short diagonal incised lines (Foster Trailed-Incised)	1	-	1
2+ sets of short diagonal incised lines (Foster Trailed-Incised)	-	1	1
3+ sets of short diagonal incised lines (Foster Trailed-Incised)	-	1	1

Table 34. Grog-bone-tempered decorated sherds and decorated elements in Zone H, cont.

Decorative method and element	Rim	Body	N
<i>Incised-Punctated</i>			
nested incised triangles-hatched triangular el.-incised circle with small circular punctations (Crockett Curvilinear Incised)	1	-	1
straight incised line-adjacent tool punctated row	-	1	1
<i>Neck Banded (Nash Neck Banded)</i>			
horizontal neck banded rows	-	1	1
parallel neck banded rows	-	2	2
<i>Punctated</i>			
cane punctated rows	-	1	1
single fingernail punctation	-	1	1
tool punctated rows	2	1	3
<i>Ridged (Belcher Ridged, var. Belcher)</i>			
parallel ridged	-	2	2
<i>Ridged-Brushed (Belcher Ridged, var. Byram's Ferry)</i>			
parallel ridged-parallel brushed between ridges	-	2	2
<i>Roughened (McKinney Plain)</i>			
roughened surface	3	-	3
<i>Roughened-Appliqued (McKinney Appliqued)</i>			
roughened surface-bracket-shaped appliqued el. under lip tab	1	-	1
<i>Roughened-Brushed (McKinney Brushed)</i>			
horizontal brushed-roughened surface	1	-	1
<i>Trailed (Foster Trailed-Incised)</i>			
multiple curvilinear trailed lines	-	5	5
parallel trailed lines	-	1	1
Fine Ware			
<i>Engraved</i>			
curvilinear engraved lines	-	1	1
curvilinear opposed engraved lines-hatched pendant triangle el. (Hatchel Engraved)	-	1	1

Table 34. Grog-bone-tempered decorated sherds and decorated elements in Zone H, cont.

Decorative method and element	Rim	Body	N
diagonal engraved lines-curvilinear engraved lines	-	1	1
diagonal engraved zone with curvilinear hatched lines and negative oval	-	1	1
diagonal hatched zone	-	1	1
diagonal engraved line-hatched triangle el.	-	1	1
1+ horizontal engraved line	2	-	2
2+ horizontal engraved lines	-	2	2
+2 widely-spaced horizontal engraved lines	2	1	3
3+ horizontal engraved lines	-	1	1
horizontal engraved line-narrow hatched zone-oval-shaped el.	-	1	1
horizontal-curvilinear engraved lines-engraved/excised zones	1	-	1
horizontal-diagonal engraved lines	2	-	2
horizontal-diagonal engraved lines-cross-hatched triangle el.	-	1	1
horizontal engraved line-hatched triangle el.	-	1	1
horizontal engraved line-triangular-shaped cross-hatched zone	-	1	1
horizontal engraved line-vertical bracket el.-diagonal engraved lines	-	1	1
horizontal-vertical engraved lines	-	1	1
horizontal line-short vertical hatched lines	-	1	1
parallel engraved lines	-	1	1
parallel engraved lines, widely-spaced	-	1	1
straight engraved line	-	1	1
1+ horizontal engraved line with row of tick marks	-	1	1
horizontal-curvilinear vertical lines with tick marks (Glassell Engraved)	1	-	1
cross-hatched scroll fill zone	-	1	1
diagonal hatched scroll fill zone	-	1	1
horizontal engraved lines-curvilinear scroll fill zone-hatched bracket el. (Barkman Engraved)	1	-	1
horizontal scroll line-cross-hatched scroll fill zone—vertical curvilinear engraved line-cross-hatched bracket el. (Barkman Engraved)	-	1	1
slanting scroll line-cross-hatched scroll fill zones (Barkman Engraved)	-	1	1
scroll fill zone with sets of curvilinear engraved lines (Barkman Engraved)	1	-	1

Table 34. Grog-bone-tempered decorated sherds and decorated elements in Zone H, cont.

Decorative method and element	Rim	Body	N
<i>Engraved-Punctated</i>			
horizontal engraved lines—one with tick marks—and row of excised punctations between lines	-	1	1
horizontal engraved lines-cross-hatched and diagonal engraved scroll fill zone—with tick marks-cross-hatched engraved bracket el.-vertical curvilinear engraved lines-slanted scroll line of excised punctations (Barkman Engraved)	3	-	3
parallel engraved lines with dashed excised punctations between the lines	-	1	1
<i>Engraved-Red-Slipped</i>			
1+ horizontal engraved line-int./ext. red-slipped	-	1	1
curvilinear engraved line with tick marks-int./ext. red-slipped	-	1	1
parallel engraved lines with excised spur el-int./ext. red-slipped	-	1	1
<i>Red-Slipped</i>			
ext. red-slipped	-	2	2
int./ext. red-slipped	-	10	10
<i>Red-Slipped-Appliqued</i>			
circular appliqued ridges-ext. red-slipped (Hatchel Engraved)	-	1	1
Totals	27	91	118

Engraved). Barkman Engraved sherds are also present in the engraved-punctated class, including three rims with horizontal engraved lines, cross-hatched and diagonal engraved scroll fill zones with tick marks, a cross-hatched engraved bracket element, vertical curvilinear engraved lines, and a slanted scroll line of excised punctations (see Figure 94d).

The remainder of the fine wares include engraved-red-slipped, red-slipped, and red-slipped-appliqued body sherds (see Table 34). The latter is from a Hatchel Engraved bottle, as is a bottle body sherd with curvilinear opposed engraved lines with hatched pendant triangle elements.

The bone-tempered decorated sherds in Zone H are dominated by sherds from fine ware vessels, as 86 percent of the sherds in this zone are fine wares (Table 35). The few utility ware sherds are from Pease Brushed-Incised, Belcher Ridged, *var. Belcher*, and Foster Trailed-Incised, *var. unspecified* vessels.

The bone-tempered fine wares in Zone H include engraved (n=11), engraved-lip notched (n=1), engraved-punctated (n=1), engraved-red-slipped (n=2), red-slipped (n=8), and trailed (n=2)

Table 35. Bone-tempered decorated sherds and decorated elements in Zone H.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Brushed-Appliqued</i>			
horizontal brushed marks-vertical appliqued ridges (Pease Brushed-Incised)	-	1	1
<i>Incised</i>			
straight incised line	-	1	1
<i>Ridged-Brushed (Belcher Ridged)</i>			
parallel ridged-parallel brushed	-	1	1
<i>Trailed (Foster Trailed-Incised)</i>			
multiple curvilinear trailed lines	-	1	1
Fine Ware			
<i>Engraved</i>			
circle engraved el. on interior vessel surface (Bowie Engraved)	1	-	1
closely-spaced curvilinear engraved lines	-	1	1
curvilinear hatched bracket el.	-	1	1
1+ horizontal engraved line	-	1	1
3+ widely-spaced horizontal engraved lines	1	-	1
2+ horizontal engraved lines, 1 with tick marks	-	1	1
horizontal-vertical engraved lines-vertical cross-hatched zones	-	1	1
horizontal engraved line with tick marks, horizontal-vertical scroll line-horizontal narrow zone with vertical hatched lines (Barkman Engraved)	1	-	1
opposed engraved lines	-	1	1
rectilinear cross-hatched zone	-	1	1
vertical engraved line on interior vessel surface	1	-	1
<i>Engraved-Lip Notched</i>			
1+ horizontal engraved line (Simms Engraved)	1	-	1
<i>Engraved-Punctated</i>			
horizontal-vertical engraved lines-cross-hatched bracket el.- excised punctated row in panel (Simms Engraved)	1	-	1
<i>Engraved-Red-Slipped</i>			
1-2+ widely-spaced horizontal engraved lines-int./ext. red-slipped	-	1	1

Table 35. Bone-tempered decorated sherds and decorated elements in Zone H, cont.

Decorative method and element	Rim	Body	N
horizontal-vertical excised el.-int. red-slipped	-	1	1
<i>Red-Slipped</i>			
ext. red slipped	-	3	3
int./ext. red-slipped	-	5	5
<i>Trailed (Keno Trailed)</i>			
multiple curvilinear trailed lines	-	2	2
Totals	6	23	29

decorative elements (see Table 35). Among these are sherds from Barkman Engraved, Bowie Engraved, and Simms Engraved vessels as well as Keno Trailed, *var. unspecified* vessels. Thirty-two percent of the fine wares are sherds from red-slipped vessels, and two other body sherds have engraved and red-slipped decorative elements.

About 42 percent of the decorated shell-tempered wares in Zone H are from utility ware vessels (Table 36). These include sherds with applied nodes (including one body sherd with at least three rows of applied nodes, probably from a Moore Noded vessel), fillets, and ridges from McKinney Plain, Nash Neck Banded, and Emory Punctated vessels.

There are two Karnack Brushed-Incised shell tempered body sherds in Zone H, along with one Foster Trailed-Incised, *var. Foster* rim with sets of short diagonal incised lines (Figure 99 and see Table 36). There is also one body sherd with an applied node cluster and applied ridge on the lower part of the rim, a diagonal applied fillet on the body, along with vertical incised lines and vertical punctations (see Figure 89f).

Nash Neck Banded rim and body sherds (n=12) are common in the shell-tempered utility ware sherds in Zone H. Probable Emory Punctated-Incised rim and body sherds with fingernail or tool punctations are also in the assemblage.

Almost 90 percent of the shell-tempered fine ware sherds from Zone H have a red slip, primarily a red slip on both interior and exterior vessel surfaces (see Table 36), either from Clement Redware vessels or Avery Engraved and Simms Engraved vessels. The shell-tempered fine ware rims have at least one horizontal engraved line, including one Simms Engraved vessel with tick marks on a horizontal engraved line. One Keno Trailed, *var. unspecified* vessel sherd has horizontal and curvilinear trailed lines below at least three horizontal rows of excised punctations (see Figure 96i).

One red and white painted body sherd (i.e., white paint applied over red as well as red applied next to white) is in Zone H (Figure 100), the initial zone with specialized buildings constructed atop the primary platform mound, and forming the base of the second platform (see Figure 3). The vessel sherd is tempered with quartz sand, with hematite particles in the red paint, and mussel shell

Table 36. Shell-tempered decorated sherds and decorated elements in Zone H.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Appliqued</i>			
circular appliqued node	-	1	1
straight row of appliqued nodes	-	1	1
3+ appliqued node rows	-	1	1
horizontal appliqued fillet, mid-rim	1	-	1
parallel appliqued ridges	-	2	2
straight appliqued ridge	-	4	4
straight but discontinuous appliqued ridge	-	1	1
vertical appliqued ridges	1	-	1
<i>Appliqued-Incised</i>			
parallel appliqued ridges-parallel incised lines	-	1	1
<i>Appliqued-Punctated</i>			
straight appliqued ridge and fingernail punctated row	-	1	1
<i>Brushed (Karnack Brushed-Incised)</i>			
parallel brushed marks	-	2	2
<i>Incised</i>			
sets of short diagonal incised lines (Foster Trailed-Incised)	1	-	1
parallel incised lines	-	1	1
straight incised line	-	1	1
<i>Incised-Punctated-Appliqued</i>			
vertical incised lines-vertical punctated row-diagonal appliqued fillet on the body-diagonal appliqued ridge and appliqued node cluster on the rim	-	1	1
<i>Neck Banded (Nash Neck Banded)</i>			
horizontal neck banded rows	4	8	12
<i>Punctated</i>			
fingernail punctated row	1	-	1
tool punctated row mid-rim	1	-	1
3+ tool punctated rows	-	1	1
<i>Trailed (Foster Trailed-Incised)</i>			
curvilinear-straight traileed lines	-	1	1
straight traileed line	-	2	2

Table 36. Shell-tempered decorated sherds and decorated elements in Zone H. cont.

Decorative method and element	Rim	Body	N
<i>Trailed-Incised (Foster Trailed-Incised)</i>			
4 sets of short diagonal incised lines above curvilinear trailed lines on the vessel body	1	-	1
Fine Ware			
<i>Engraved</i>			
curvilinear engraved lines, widely-spaced	-	1	1
diagonal-vertical curvilinear engraved lines	-	1	1
1+ horizontal engraved line	1	-	1
1+ horizontal engraved line with tick marks (Simms Engraved)	1	-	1
slanted scroll lines-narrow zone with vertical hatched lines	-	1	1
<i>Engraved-Red-Slipped</i>			
curvilinear engraved line-int./ext. red-slipped (Avery Engraved)	-	1	1
1-2+ widely-spaced horizontal engraved lines-int./ext. red-slipped	4	17	21
horizontal engraved lines-set of vertical engraved lines (Simms Engraved)	1	-	1
<i>Red-Slipped</i>			
ext. red-slipped	-	1	1
int./ext. red-slipped	5	17	22
<i>Trailed-Punctated (Keno Trailed)</i>			
horizontal-curvilinear trailed lines-circular punctated rows	-	1	1
Totals	22	69	91

particles in the white paint (see Robinson, Appendix 3). The sherd may be from an eastern Arkansas (Arkansas River basin) or northeastern Arkansas polychrome vessel made ca. 500 years ago by late Mississippian people, and then traded/exchanged with the Nasoni Caddo living in the Hatchel mound community. The sherd may be from a Nodena Red and White or Avenue Polychrome vessel, and both types date to this temporal period.

A lower Arkansas River Carson Red on buff, *var. Olmond* vessel (Phillips 1970:63) was recovered from a burial looted in the late 1970s in one of the village areas at the Hatchel site (Perttula 2014a:78). McKinnon (2017:75 and Figure 51) notes that two red on buff sherds were recovered in village areas at the Battle (3LA1) site on the Red River in southwestern Arkansas.

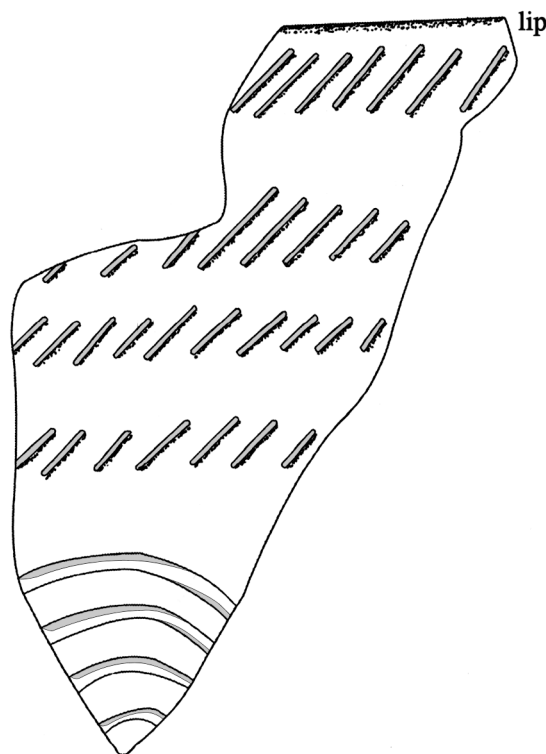


Figure 99. Shell-tempered Foster Trailed-Incised, *var. Foster* rim sherd from Zone H.

Below Zone H and Above Zone I Decorated Sherd Elements

Given the apparent stratigraphic context of these two zones as recognized by WPA archaeologists, for the purposes of discussion of the decorated sherds, these two zones are combined. They apparently represent the topmost primary platform mound deposits (Zones I-J, see Figure 3) and the bottommost (or earliest) deposits of the second platform mound zones, before the first specialized structures were constructed in Zone H. According to Beatty (1939:369), “all sherds catalogued as below or under [Phase] H or any [Phase] feature, belong with Phase I.” They are apparently primarily mound fill zones (original mound deposits, according to Beatty [1939]), not structural zones, and likely were mostly gathered from existing and contemporaneous non-mound habitation deposits that were present in proximity to the area of the mound under construction (see Perttula and Nelson 2003; Perttula 2005a). Nevertheless, the density of sherds recovered from the two zones (1830+, see Table 1) also suggests that they may represent in part sherds in features and unrecognized features deposited during the initial occupation of Zone H.

Approximately 51 percent of the decorated grog-tempered sherds in below Zone H and above Zone I are from utility wares, and 49 percent are from fine ware vessels (Table 37). About 25 percent of the utility wares are from vessels with brushed marks (Karnack Brushed-Incised); 19 percent have incised lines; and 14 percent have applied nodes, fillets, or ridges.

Most of the grog-tempered sherds with applied elements have a single straight applied ridge (see Table 37). About 12.5 percent have nodes (Figure 101h), typically on the rim, and the remainder have applied fillets or ridges oriented in different ways on the vessel body. These

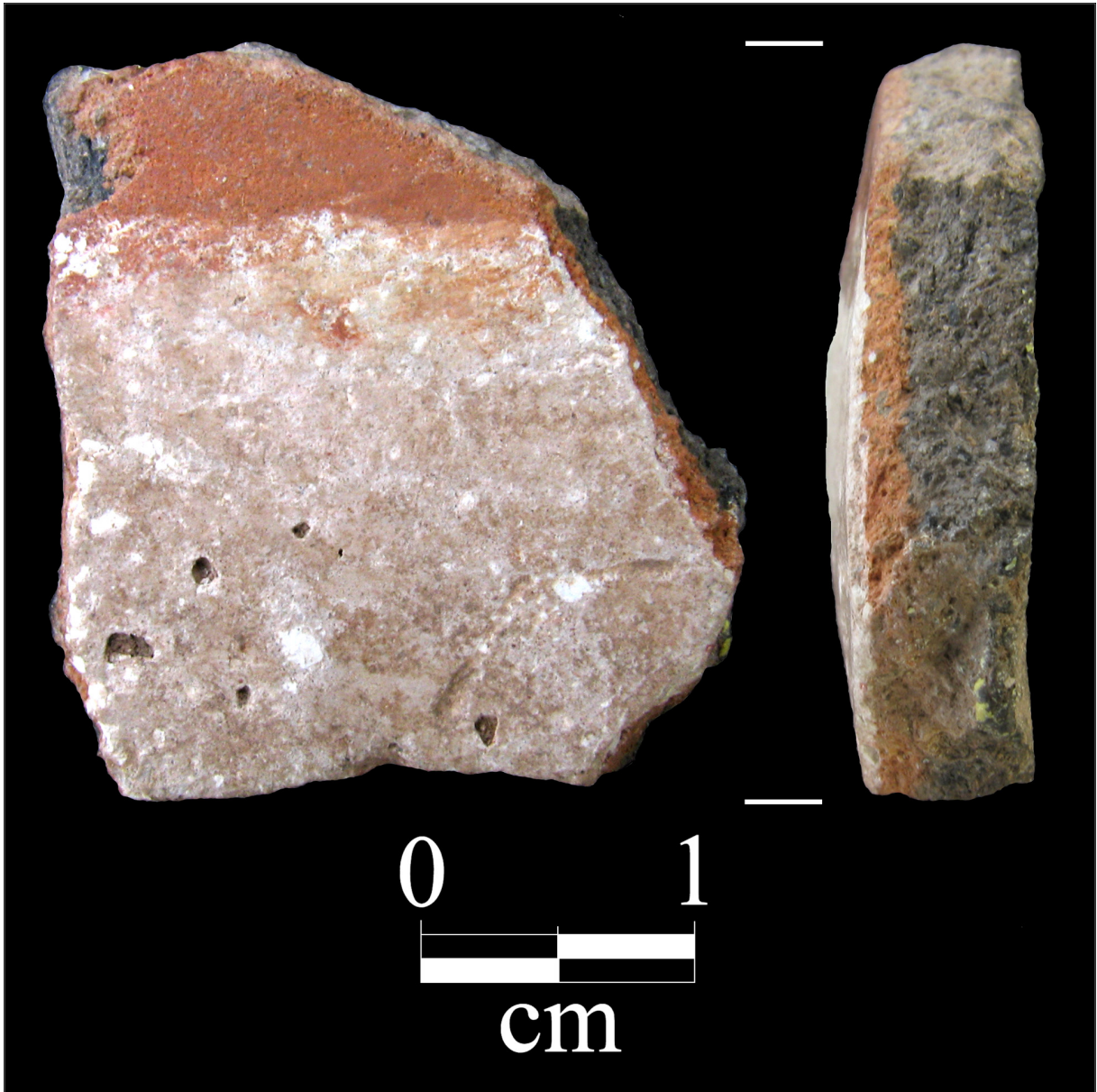


Figure 100. Red and white painted body sherd from Zone H in the platform mound at the Hatchel site.

sherds are from utility ware jars, probably including McKinney Appliqued and Nash Neck Banded vessels. Another five body sherds have both appliqued and incised decorative elements, and these are probably from McKinney Appliqued vessels.

The brushed, brushed-appliqued, brushed-incised, and brushed-punctated sherds are from Karnack Brushed-Incised and Pease Brushed-Incised vessels. Karnack Brushed-Incised rim sherds have both horizontal and diagonal brushing marks and likely vertical brushing or vertical brushed-incised marks on vessel bodies (see Table 37). The brushed-punctated sherds have tool punctated rows—likely at the rim-body juncture of vessels—with curvilinear and vertical brushing marks on the vessel body.

Table 37. Grog-tempered decorated sherds and decorated elements in below Zone H and above Zone I mound sediments.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Appliqued</i>			
appliqued node below lip	1	-	1
appliqued node cluster and vertical appliqued ridge	1	-	1
2+ rows of appliqued nodes and straight appliqued ridge	-	1	1
large circular appliqued node	-	1	1
curvilinear appliqued ridge	-	1	1
parallel appliqued ridges	-	1	1
straight appliqued fillet	-	2	2
straight appliqued ridge	-	29	29
vertical appliqued ridge	-	1	1
set of vertical appliqued ridges	-	1	1
vertical row of appliqued nodes	1	-	1
<i>Appliqued-Incised</i>			
parallel incised lines-straight appliqued fillet	-	1	1
straight incised line-straight appliqued ridge	-	3	3
appliqued node encircled by curvilinear incised lines	-	1	1
<i>Brushed</i>			
diagonal brushed marks	2	1	3
horizontal brushed	6	2	8
opposed brushed marks	-	3	3
parallel brushed marks	-	51	51
vertical brushed marks	-	8	8
<i>Brushed-Appliqued</i>			
opposed brushed-straight appliqued ridge	-	1	1
parallel brushed-parallel appliqued ridges	-	1	1
parallel brushed-straight appliqued fillet	-	1	1
parallel brushed-straight appliqued ridge	-	4	4
<i>Brushed-Incised</i>			
parallel brushed-incised marks and lines	-	21	21
vertical brushed-incised marks and lines	-	2	2
<i>Brushed-Punctated</i>			
curvilinear brushed marks-linear tool punctated row	-	1	1
parallel brushed and linear tool punctated row	-	1	1
vertical brushed-diagonal tool punctated row	-	1	1

Table 37. Grog-tempered decorated sherds and decorated elements in below Zone H and above Zone I mound sediments, cont.

Decorative method and element	Rim	Body	N
<i>Incised</i>			
cross-hatched incised lines	-	1	1
multiple curvilinear incised lines	-	1	1
curvilinear hatched incised zones	-	1	1
curvilinear hatched incised triangle el.	-	1	1
diagonal incised lines	1	-	1
diagonal hatched column	-	1	1
1+ set of short diagonal incised lines (Foster Trailed-Incised)	-	2	2
3+ sets of diagonal incised lines (Foster Trailed-Incised)	1	-	1
diagonal opposed incised lines	-	1	1
diagonal opposed incised lines-hatched diagonal zones	-	1	1
1+ horizontal incised line	1	1	2
2+ horizontal incised lines	2	-	2
3+ horizontal incised lines	2	-	2
horizontal-vertical incised lines	-	1	1
horizontal-vertical-diagonal incised lines	-	1	1
parallel incised lines	-	25	25
closely-spaced parallel incised lines	-	5	5
straight incised line	-	3	3
closely-spaced vertical incised lines	-	3	3
<i>Incised-Punctated</i>			
incised columns filled with tool punctations	-	1	1
curvilinear incised zones filled with small circular punctations	-	1	1
curvilinear incised zones filled with large cane punctations	-	1	1
curvilinear incised zone with tool punctated row	-	1	1
diagonal incised lines-tool punctated row under the lip	1	-	1
diagonal incised lines with tool punctated row above and below incised lines	1	-	1
diagonal opposed incised lines above tool punctated row	-	1	1
horizontal incised zones filled with circular punctations	-	3	3
horizontal incised lines-curvilinear incised lines and a zone of small circular punctations (Crockett Curvilinear Incised)	1	-	1
horizontal-diagonal incised lines and row of circular punctations between	-	1	1

Table 37. Grog-tempered decorated sherds and decorated elements in below Zone H and above Zone I mound sediments, cont.

Decorative method and element	Rim	Body	N
horizontal incised lines-incised triangle el. filled with linear tool punctations	1	-	1
horizontal incised lines-incised triangle el. filled with rows of fingernail punctations	-	1	1
tool punctated row below lip, 10+ closely-spaced horizontal incised lines-tool punctated row at rim-body juncture	2	-	2
incised triangle filled with tool punctated rows	-	2	2
straight incised line-adjacent fingernail punctated row	-	1	1
Straight incised line-single tool punctated row	-	1	1
straight incised line-adjacent tool punctations	-	1	1
<i>Neck Banded (Nash Neck Banded)</i>			
horizontal neck bands	2	9	11
<i>Punctated</i>			
rows of closely-spaced cane punctations	-	1	1
circular punctated row	-	1	1
fingernail punctated row/rows	-	5	5
linear tool punctated row/rows	-	5	5
tool punctated row	-	2	2
tool punctated row, mid-rim	1	-	1
<i>Ridged (Belcher Ridged)</i>			
parallel ridged	-	1	1
vertical ridged	-	1	1
<i>Ridged-Brushed (Belcher Ridged)</i>			
parallel ridged-parallel brushed marks	-	8	8
<i>Roughened (McKinney Plain)</i>			
roughened surface	3	1	4
<i>Roughened-Appliqued (McKinney Appliqued)</i>			
roughened surface-vertical appliqued ridge	1	-	1
<i>Trailed (Foster Trailed-Incised)</i>			
curvilinear trailed lines	-	1	1
multiple curvilinear trailed lines	-	9	9
opposed curvilinear trailed lines	-	3	3
parallel trailed lines	-	4	4

Table 37. Grog-tempered decorated sherds and decorated elements in below Zone H and above Zone I mound sediments, cont.

Decorative method and element	Rim	Body	N
vertical trailed lines	-	1	1
<i>Trailed-Appliqued (Foster Trailed-Incised)</i>			
curvilinear trailed lines and vertical appliqued fillet	-	1	1
Fine Ware			
<i>Engraved</i>			
cross-hatched engraved zone	-	1	1
cross-hatched engraved zone below neck	-	1	1
cross-hatched engraved zone and straight engraved line	-	1	1
curvilinear engraved lines, multiple (Taylor Engraved)	-	10	10
curvilinear engraved lines-curvilinear hatched zone-negative circle el. (Avery Engraved)	-	1	1
curvilinear engraved lines and narrow hatched zone	-	3	3
curvilinear opposed engraved lines	-	1	1
curvilinear engraved lines-hatched bracket el. (Barkman Engraved)	-	1	1
curvilinear engraved lines and hatched triangle el.	-	3	3
curvilinear hatched zone	-	1	1
curvilinear cross-hatched zone with hooked arm el. with open pendant triangles (Hatchel Engraved)	-	1	1
curvilinear hatched fill zone (Glassell Engraved)	-	1	1
curvilinear hatched fill zone-tick marks (Glassell Engraved)	-	1	1
curvilinear hatched triangle el.	-	1	1
diagonal engraved lines	-	2	2
diagonal excised zone	-	1	1
diagonal engraved line and cross-hatched triangle el.	1	-	1
diagonal opposed engraved lines and sets of diagonal lines	-	1	1
diagonal engraved triangle el.-curvilinear hatched zone (Barkman Engraved)	-	1	1
excised triangle el.	1	1	2
hatched circle el.	-	1	1
diagonal hatched lines	-	1	1
hatched pendant triangle el.	-	1	1
1+ horizontal engraved line	11	11	22

Table 37. Grog-tempered decorated sherds and decorated elements in below Zone H and above Zone I mound sediments, cont.

Decorative method and element	Rim	Body	N
2+ horizontal engraved lines	13	12	25
3+ horizontal engraved lines	9	1	10
4+ horizontal engraved lines	5	5	10
5+ horizontal engraved lines	1	-	1
6+ horizontal engraved lines	1	-	1
horizontal engraved lines below the neck	-	1	1
horizontal-curvilinear engraved lines-vertical hatched bracket el.-cross-hatched triangle el. (Glassell Engraved)	-	1	1
3+ horizontal engraved lines-lower curvilinear engraved line	1	-	1
4+ horizontal engraved lines-rectilinear engraved lines (Barkman Engraved)	1	-	1
horizontal engraved lines and diagonal hatched vertical columns (Barkman Engraved)	-	1	1
horizontal engraved lines and hatched narrow column/zone	5	-	5
horizontal engraved lines-hatched triangle el.	4	1	5
horizontal engraved lines-open triangle el. in row	-	1	1
horizontal engraved lines and curvilinear excised zone	1	-	1
2 horizontal engraved lines-horizontal excised zone	1	-	1
3+ horizontal lines-horizontal excised zone	1	-	1
horizontal engraved line-horizontal excised zone-narrow horizontal cross-hatched zone	1	-	1
horizontal excised zone	-	2	2
horizontal-diagonal engraved lines	3	7	10
horizontal-diagonal engraved lines-rectilinear excised zone	1	-	1
horizontal-diagonal engraved lines-vertical hatched lines	1	-	1
horizontal engraved line and diagonal hatched lines	-	1	1
horizontal and vertical engraved lines-vertical hatched bracket el.-hatched triangle el.	1	-	1
horizontal-vertical engraved lines	-	2	2
horizontal-vertical engraved lines and set of vertical engraved lines	-	1	1
horizontal-vertical-curvilinear engraved lines	-	1	1
horizontal engraved lines-horizontal scroll line and rectilinear open area-cross-hatched vertical bracket el. (Barkman Engraved)	1	-	1
horizontal engraved lines-vertical hatched bracket el.-scroll fill zone (Barkman Engraved)	1	-	1
horizontal engraved lines-slanted scroll line-hatched and cross- hatched scroll fill zones (Barkman Engraved)	1	-	1

Table 37. Grog-tempered decorated sherds and decorated elements in below Zone H and above Zone I mound sediments, cont.

Decorative method and element	Rim	Body	N
horizontal scroll el. and scroll fill zone with sets of vertical engraved lines (Barkman Engraved)	1	-	1
horizontal-vertical engraved lines and scroll fill zone	1	-	1
negative scroll el. and upper and lower scroll fill zones	1	-	1
slanted scroll and curvilinear hatched scroll fill zone (Glassell Engraved)	-	3	3
scroll fill zone with excised zones	-	1	1
opposed engraved lines	-	3	3
opposed engraved lines-narrow hatched zones	-	1	1
parallel engraved lines	-	14	14
parallel and opposed engraved lines	-	1	1
rectilinear engraved lines (Barkman Engraved)	-	3	3
rectilinear cross-hatched zone (Barkman Engraved)	-	1	1
straight engraved line	-	9	9
straight engraved line and narrow hatched zone	-	1	1
straight excised zone	-	2	2
vertical engraved line/lines	-	2	2
vertical engraved columns filled with diagonal opposed triangle el.	-	1	1
vertical hatched bracket el.	1	1	2
vertical-curvilinear engraved lines in panels/zones (Hatchel Engraved)	-	1	1
1+ horizontal engraved line with excised tick marks	-	2	2
2+ horizontal engraved lines, one with tick marks	1	2	3
3+ horizontal engraved lines, two with tick marks	-	1	1
horizontal engraved line with diagonal tick marks	-	2	2
horizontal engraved lines-vertical hatched zone-tick marks on one line (Barkman Engraved)	1	-	1
horizontal engraved lines-set of vertical engraved lines-narrow cross-hatched zones-horizontal engraved line with tick marks above carina (Barkman Engraved)	1	-	1
horizontal engraved lines-vertical engraved lines with tick marks	-	2	2
parallel engraved lines—one with tick marks—narrow excised	-	1	1
straight engraved line and diagonal tick marks	-	1	1
straight engraved line-excised dash marks (Belcher Engraved)	-	1	1
vertical curvilinear engraved lines and diagonal line with tick marks (Simms Engraved)	1	-	1
<i>Engraved-Appliqued (Hatchel Engraved)</i>			
horizontal-diagonal engraved lines and vertical appliqued ridge	-	2	2

Table 37. Grog-tempered decorated sherds and decorated elements in below Zone H and above Zone I mound sediments, cont.

Decorative method and element	Rim	Body	N
<i>Engraved-Brushed</i>			
parallel brushed marks and overlying curvilinear engraved lines	-	1	1
<i>Engraved-Punctated</i>			
curvilinear and diagonal engraved lines-diagonal excised punctated row-excised triangle el.	-	1	1
curvilinear engraved zone with excised punctations	-	1	1
1+ horizontal engraved line-row of excised punctations	-	3	3
horizontal engraved lines with a row of excised punctations between them (Simms Engraved)	2	2	4
horizontal engraved lines with rows of excised punctations between them and another row of excised punctations at the base of the lower vessel panel (Belcher Engraved)	2	-	2
horizontal engraved line above row of excised punctations (Belcher Engraved)	-	1	1
2+ horizontal engraved lines-engraved dash mark above lines	-	1	1
horizontal engraved lines-curvilinear engraved zones with excised punctations-central circle engraved el. (Barkman Engraved)	1	-	1
horizontal engraved line-diagonal hatched triangle el.-row of excised punctations (Barkman Engraved)	-	1	1
horizontal-vertical engraved lines and excised punctated row between them-cross-hatched vertical bracket divider (Simms Engraved)	1	-	1
horizontal engraved lines-sets of vertical engraved lines-rows of excised punctations (Barkman Engraved)	1	-	1
horizontal engraved lines-vertical engraved columns with excised punctations (Barkman Engraved)	2	-	2
slanted scroll line-hatched scroll fill zone-excised punctated row (Barkman Engraved)	-	1	1
vertical curvilinear engraved line-excised punctated row	-	1	1
vertical engraved line-horizontal rows of tick marks-excised punctations between the ticked rows	-	2	2
vertical hatched zone-excised punctated row above	-	1	1
<i>Engraved-Red-Slipped</i>			
curvilinear engraved zone with diagonal hatched lines-ext. red-slipped	-	1	1

Table 37. Grog-tempered decorated sherds and decorated elements in below Zone H and above Zone I mound sediments, cont.

Decorative method and element	Rim	Body	N
curvilinear engraved lines-diagonal hatched curvilinear zone- hatched pendant triangles-int./ext. red-slipped	-	1	1
1-2+ widely-spaced horizontal engraved lines-int./ext. red-slipped	1	3	4
interior horizontal engraved line-int./ext. red-slipped	1	-	1
<i>Engraved-Trailed (Glassell Engraved)</i>			
vertical curvilinear engraved lines-slanting scroll line with tick marks-curvilinear hatched scroll fill zones-diagonal opposed trailed lines on vessel body	1	-	1
<i>Red-Slipped</i>			
int./ext. red-slipped	1	23	24
ext. red-slipped	-	2	2
<i>Trailed (Keno Trailed)</i>			
multiple curvilinear trailed lines	-	3	3
opposed curvilinear trailed lines	1	-	1
Totals	119	447	566

*one sherd has a grit temper

The grog-tempered rim sherds from vessels with incised decorations in below Zone H and above Zone I have diagonal and horizontal lines; one rim sherd is from a Foster Trailed-Incised, *var. Foster* vessel, as are two body sherds (see Table 37). Body sherds primarily have simple geometric elements, but three sherds have curvilinear incised elements, including lines, hatched zones, and triangles.

The incised-punctated grog-tempered sherds in these zones (representing 7.3 percent of the utility wares) are stylistically diverse with respect to the type of punctations that were used as well as the character of the incised elements (see Table 37). There are rims with diagonal incised lines with tool punctations above and below the lines, rims with 10+ horizontal lines between rows of tool punctations below the lip and at the base of the rim (see Figures 101d and 102a), and another rim has horizontal incised lines with incised triangles filled with linear tool punctations.

Incised-punctated body sherds have incised zones filled with circular, cane, fingernail, and tool punctations; this includes one body sherd with triangular impressed punctations (see Figure 101b). These zones include columns (see Figure 102b), triangular zones (see Figure 101b-c, f), narrow horizontal zones (see Figure 101e), and curvilinear zones (see Figure 101g). One lower rim sherd has horizontal and diagonal incised lines with a row of circular punctations between the incised lines (see Figure 101a),

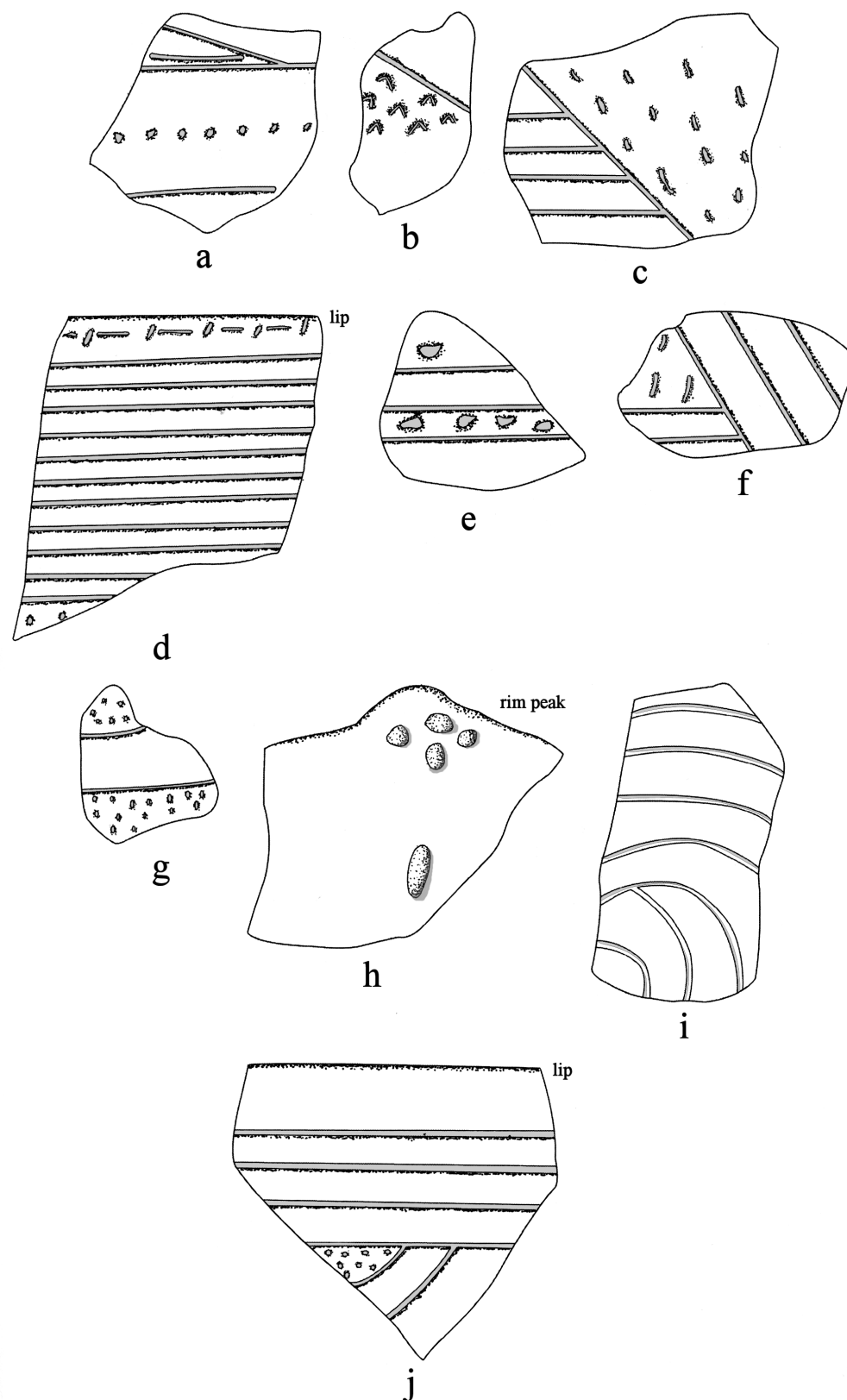


Figure 101. Selected decorative elements on grog-tempered utility ware sherds from below Zone H and above Zone I.

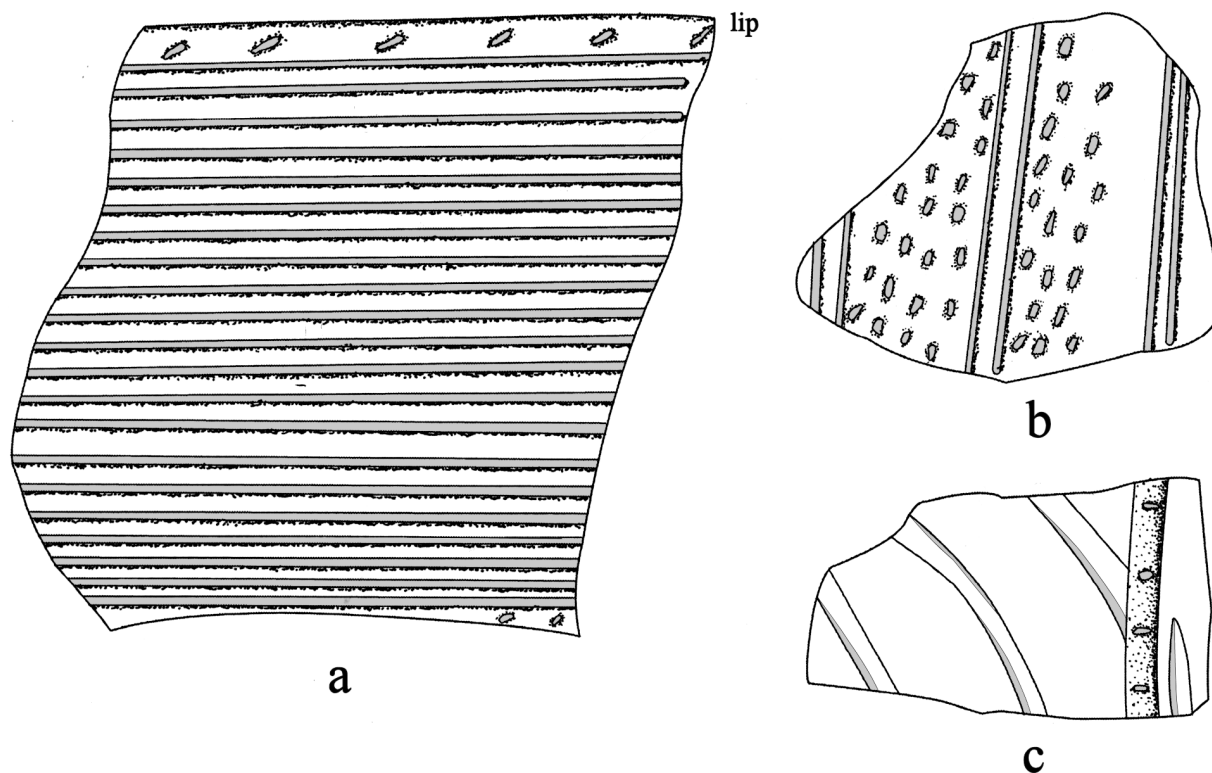


Figure 102. Incised-punctated and trailed-applied utility ware sherds from above Zone I in the Hatchel platform mound.

One incised-punctated grog-tempered sherd is from an Early Caddo period (ca. A.D. 900-1200) Crockett Curvilinear Incised vessel (see Figure 101j). This sherd has four horizontal incised lines below the vessel lip and curvilinear incised lines on the body that enclose a small semi-circle filled with small circular punctations.

About 5 percent of the utility wares in below Zone H and above Zone I have punctated elements, including circular, cane, fingernail, and tool punctations (see Table 37). One rim sherd has a row of tool punctations at the mid-rim.

Other utility wares in below Zone H and above Zone I include sherds from Nash Neck Banded (n=11, 3.8 percent of the utility wares in the two zones), Belcher Ridged (n=10, 3.5 percent), McKinney Plain (n=4, 1.4 percent), and McKinney Applied (n=1, 0.3 percent). Another 6.6 percent of the grog-tempered utility wares are from Foster Trailed-Incised, *var. unspecified body* sherds. One body sherd has curvilinear trailed lines overlain by a vertical applied fillet (see Figure 102c).

The grog-tempered fine wares in below Zone H and above Zone I include sherds from engraved (n=214, 76.8 percent), engraved-applied (n=2, 0.7 percent), engraved-brushed (n=1, 0.4 percent), engraved-punctated (n=24, 8.6 percent), engraved-red-slipped (n=7, 2.5 percent), engraved-trailed (n=1, 0.4 percent), red-slipped (n=26, 9.3 percent), and trailed (n=4, 1.4 percent) vessels (see Table 37). The most common fine ware in this assemblage is Barkman Engraved (Figures 103a-c, e, 104b-e, 105, 106b-c). Several of them are from Barkman Engraved, *var. Clear Lake* vessels with scroll elements (Figures 104b, d-e and 105), and other sherds have both engraved and excised punctated elements.

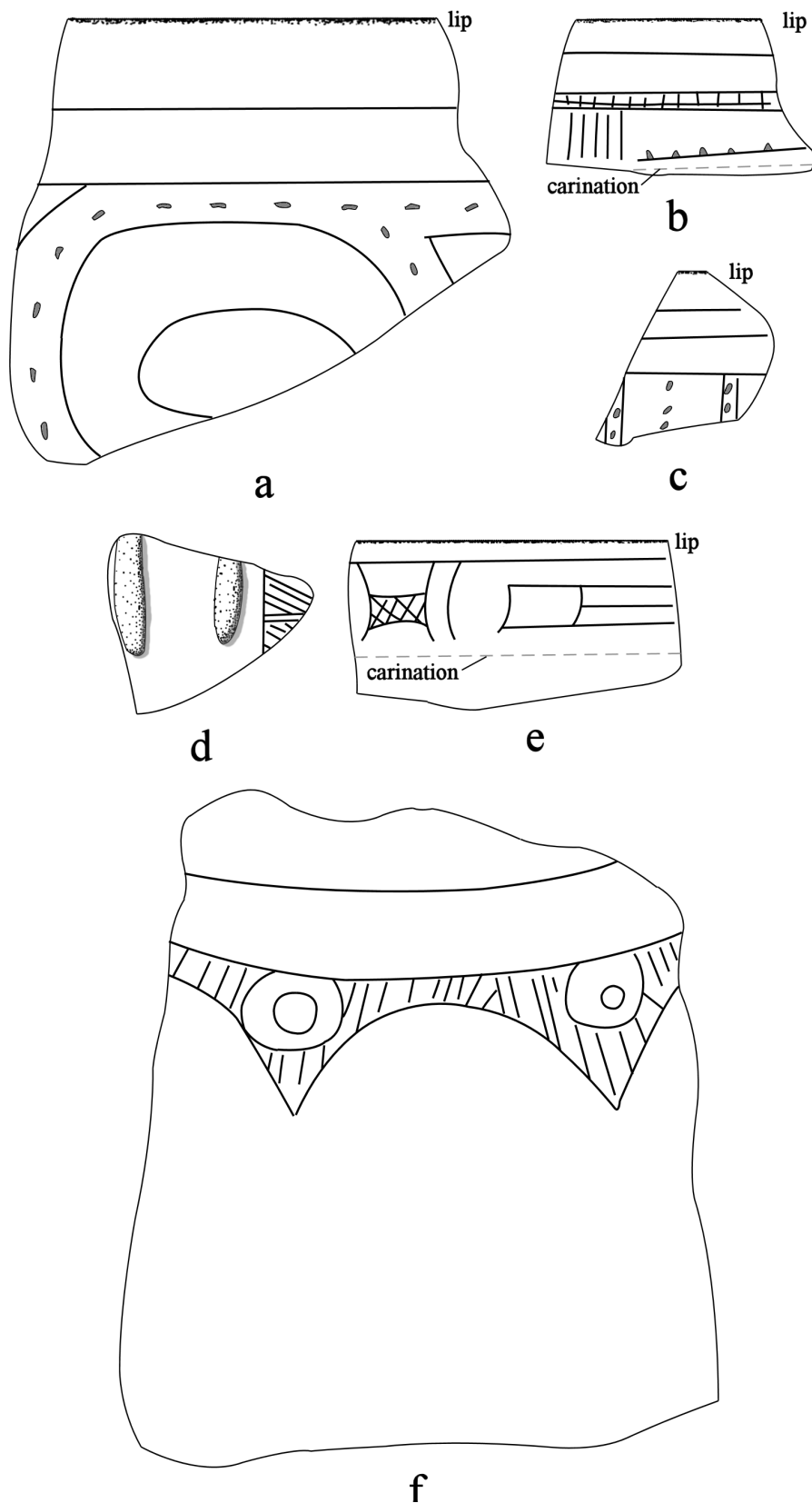


Figure 103. Selected fine ware sherds from below Zone H: a-c, e, Barkman Engraved; d, Hatchel Engraved; f, Avery Engraved.

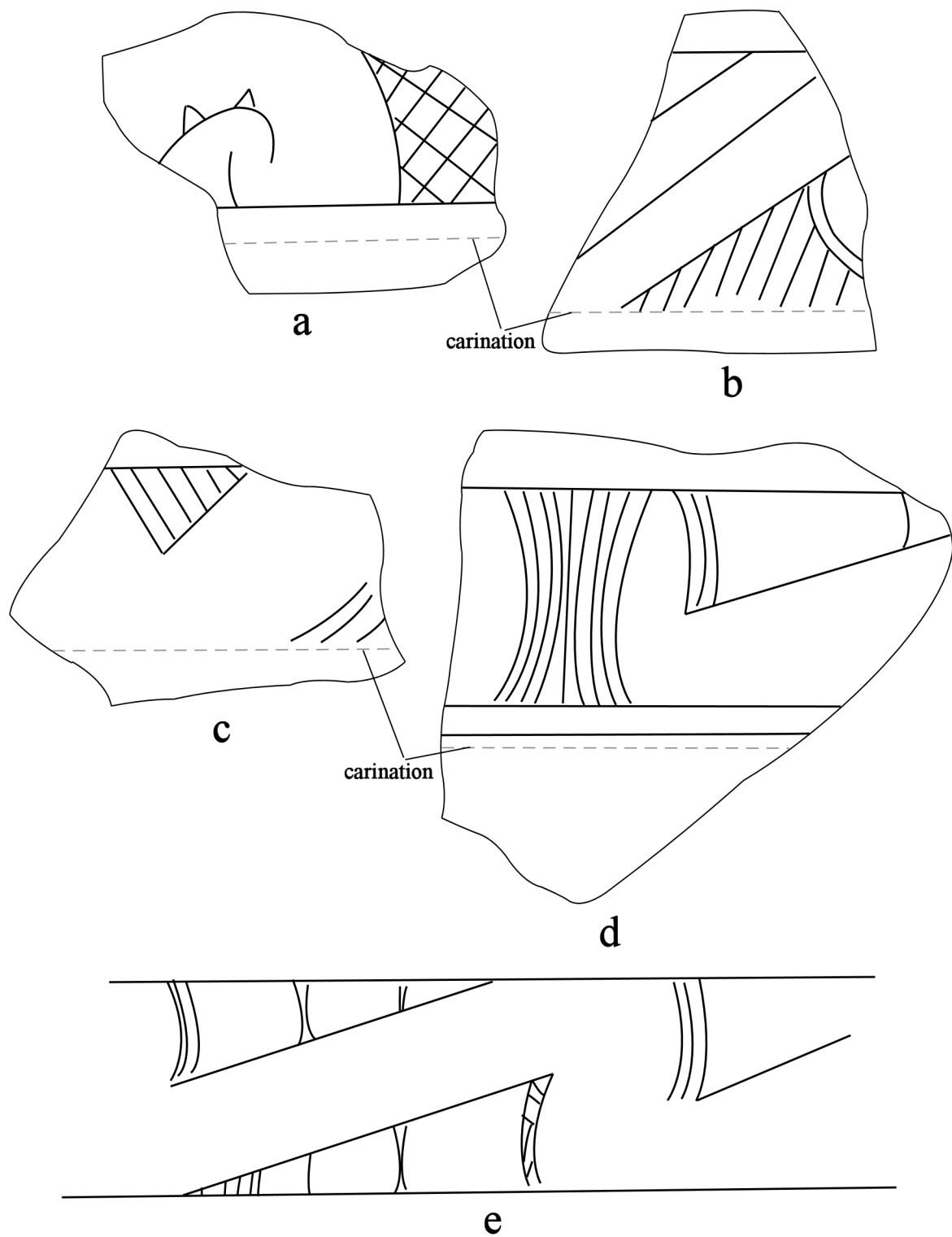


Figure 104. Hatchel Engraved and Barkman Engraved sherds from below Zone H.

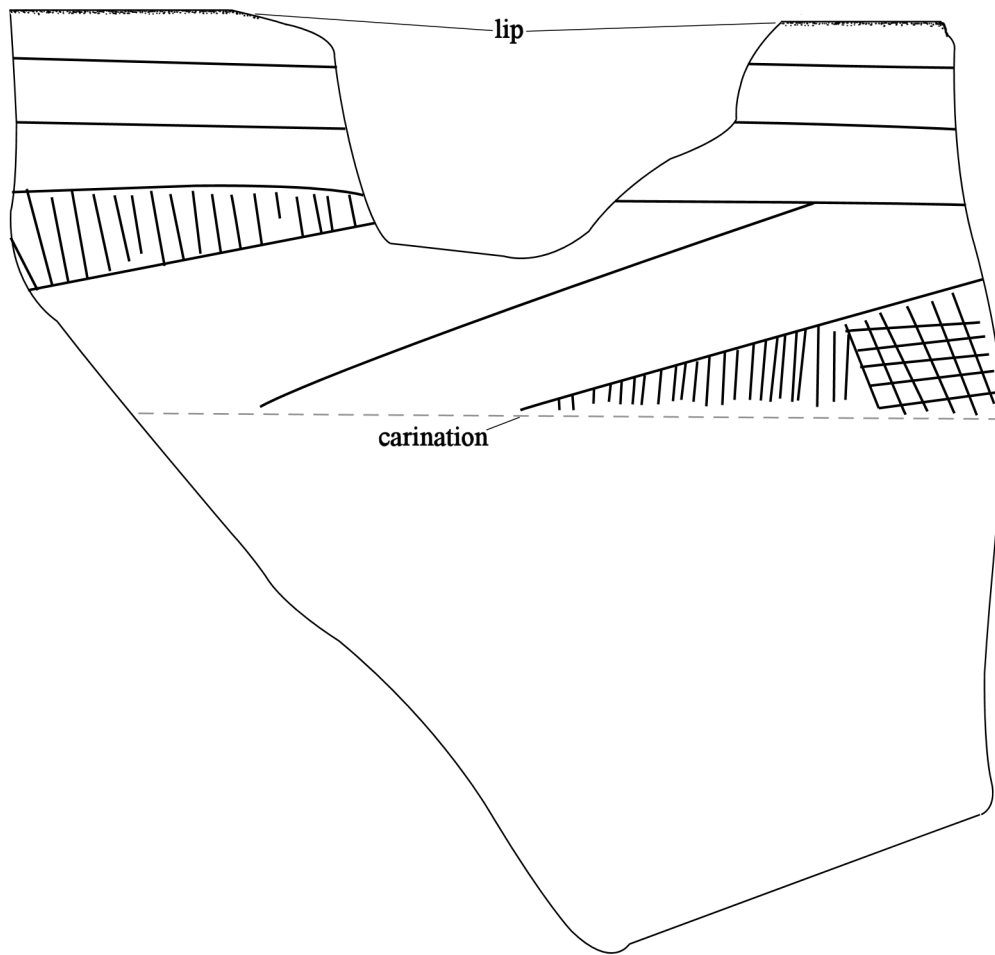


Figure 105. Barkman Engraved, var. *Clear Lake* rim sherd from below Zone H.

Other engraved fine wares types in these two zones (see Table 37) include Taylor Engraved bottle sherds (n=10), sherds from Glassell Engraved (n=7), Simms Engraved (n=6, Figure 107b), and Belcher Engraved (n=4, see Figure 106d) carinated bowls. There are also Avery Engraved bottle sherds (n=1, see Figure 103f) and engraved and engraved-appliqued sherds from Hatchel Engraved bottles (n=4, Figure 107a, see also Figures 103d and 104a).

Also present in the grog-tempered fine wares from below Zone H and above Zone I are four rim and body sherds from Keno Trailed, var. *unspecified* vessels. The one rim sherd has opposed curvilinear trailed lines (see Figure 106a).

The grog-bone-tempered decorated sherds from below Zone H and above Zone I are evenly divided between utility wares (52 percent) and fine wares (48 percent) (Table 38). The utility wares include sherds with horizontal brushing on the rim and body sherds with parallel brushed or brushed-incised marks and lines on the vessel bodies; the marks and lines are likely oriented vertically on the vessel body. One of the incised sherds is from a Foster Trailed-Incised, var. *Foster* vessel that has at least one set of short diagonal incised lines on the rim. Another incised sherd has multiple curvilinear incised lines, and this may also be from a Foster Trailed-Incised vessel; the

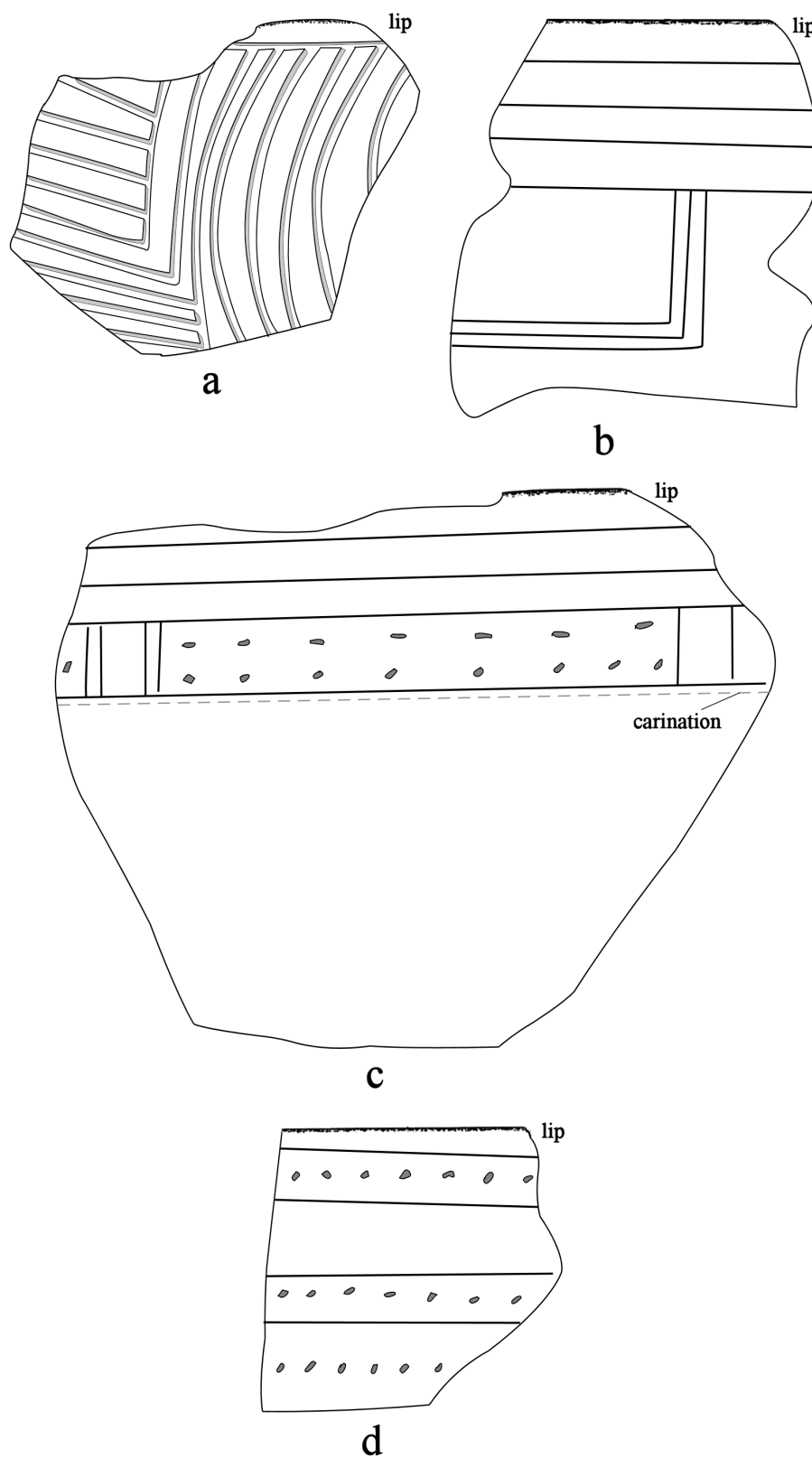


Figure 106. Selected fine ware sherds from above Zone I: a, Keno Trailed; b-c, Barkman Engraved; d, Belcher Engraved.

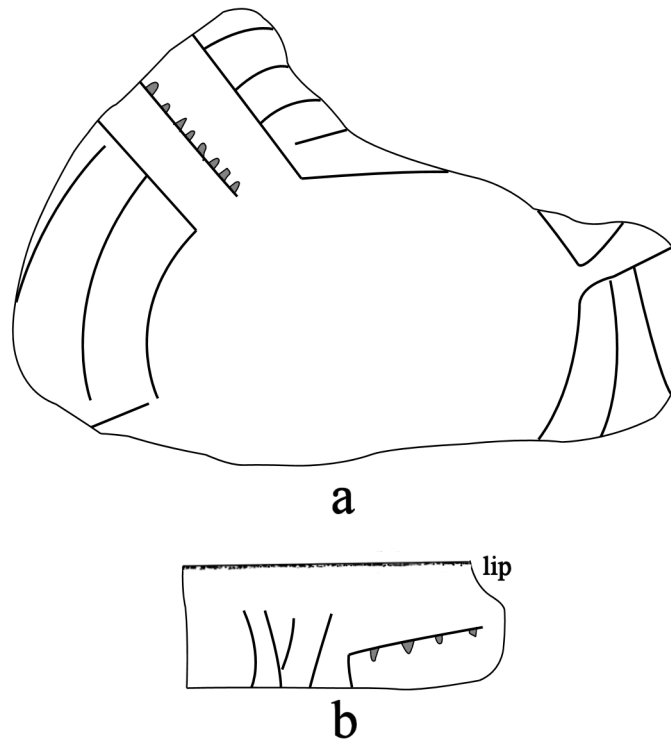


Figure 107. Hatchel Engraved and Simms Engraved sherds from above Zone I.

Table 38. Grog-bone-tempered decorated sherds and decorated elements below Zone H and above Zone I.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Brushed</i>			
horizontal brushed marks	1	-	1
parallel brushed marks	-	2	2
<i>Brushed-Incised</i>			
parallel brushed-incised marks and lines	-	1	1
<i>Incised</i>			
1+ set of short diagonal incised lines (Foster Trailed-Incised)	-	1	1
multiple curvilinear incised lines	-	1	1
opposed incised lines	-	1	1
parallel incised lines	-	2	2
<i>Incised-Appliqued</i>			
straight incised line-straight appliqued ridge	-	1	1

Table 38. Grog-bone-tempered decorated sherds and decorated elements below Zone H and above Zone I, cont.

Decorative method and element	Rim	Body	N
<i>Incised-Punctated</i>			
diagonal incised lines and row of fingernail punctations above and below incised lines	1	-	1
<i>Punctated</i>			
rows of cane punctations	-	1	1
large circular punctated rows	1	-	1
fingernail punctated row	-	1	1
<i>Trailed (Foster Trailed-Incised)</i>			
multiple curvilinear trailed lines	-	1	1
Fine Ware			
<i>Engraved</i>			
hatched triangle el.	-	1	1
2+ horizontal engraved lines	1	1	2
horizontal engraved line-vertical hatched scroll fill zone (Barkman Engraved)	1	-	1
horizontal-vertical engraved lines and set of vertical lines	1	-	1
parallel engraved lines and narrow cross-hatched zone	-	1	1
straight engraved line and narrow hatched zone	-	1	1
<i>Engraved-Punctated</i>			
excised punctated row above the carination	1	-	1
<i>Engraved-Red-Slipped</i>			
widely-spaced horizontal engraved lines-int./ext. red-slipped	-	1	1
<i>Red-Slipped</i>			
int./ext. red-slipped	1	3	4
<i>Red-Slipped-Appliqued</i>			
circular and curvilinear appliqued el.-ext. red-slipped (Hatchel Engraved)	-	1	1
Totals	8	21	29

other incised sherds in these zones have opposed or parallel incised lines. A single body sherd in the assemblage has a straight applied ridge and an adjacent straight incised line, and is probably from a McKinney Applied jar.

There is one grog-bone-tempered body sherd with incised-punctated elements, and three other sherds have cane, circular, and fingernail punctations (see Table 38). The last grog-bone-tempered utility ware is from a Foster Trilled-Incised, *var. unspecified* vessel with multiple curvilinear trailed lines.

Almost 30 percent of the grog-bone-tempered fine ware sherds in below Zone H and above Zone I deposits have a red slip on both vessel surfaces (see Table 38). Another sherd, probably from a compound bowl, has a red slip on both surfaces and widely spaced horizontal engraved lines on the exterior vessel surface. Another red-slipped sherd in these deposits is a red-slipped Hatchel Engraved bottle body sherd.

One of the engraved rim sherds is from a Barkman Engraved vessel, and three other rim or body sherds may also be from Barkman Engraved vessels (see Table 38). These have horizontal and vertical engraved lines and a set of vertical engraved lines; parallel engraved lines and a narrow cross-hatched zone; and a straight engraved line and a narrow hatched zone. A rim sherd with a row of excised punctations could also be from a Barkman Engraved vessel (see Suhm and Jelks 1962:Plate 4). The remaining engraved sherds in these zones have a hatched triangle element, or rim and body sherds with at least two horizontal engraved lines.

There are only two bone-tempered decorated sherds in below Zone H/Above Zone I (Table 39). One is a body sherd with parallel brushing marks, probably from a Karnack Brushed-Incised jar. The other is a fine ware body sherd with horizontal engraved lines, of undetermined type.

Table 39. Bone-tempered decorated sherds and decorated elements below Zone H and above Zone I.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Brushed</i>			
parallel brushed marks	-	1	1
Fine Ware			
<i>Engraved</i>			
horizontal engraved lines	-	1	1
Totals	-	2	2

More than 70 percent of the shell-tempered decorated sherds in the below Zone H and above Zone I deposits are from utility ware vessels (Table 40). The utility wares have appliqued, appliqued-punctated, neck banded, neck banded-appliqued-incised, punctated (both fingernail and tool elements), and trailed decorative elements. These are from McKinney Appliqued, Nash Neck Banded, Emory Punctated-Incised, and Foster Trailed-Incised, *var. unspecified* vessels.

Table 40. Shell-tempered decorated sherds and decorated elements below Zone H and above Zone I.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Appliqued</i>			
diagonal appliqued ridge and adjacent row of appliqued nodes	-	1	1
diagonal opposed appliqued ridges	-	1	1
straight appliqued fillet	-	1	1
straight appliqued ridge	-	3	3
<i>Appliqued-Punctated</i>			
vertical appliqued fillet-horizontal linear tool punctated row	-	1	1
<i>Neck Banded (Nash Neck Banded)</i>			
horizontal neck banded rows	1	2	3
smoothed over horizontal neck banded rows	-	1	1
<i>Neck Banded-Appliqued-Incised (Nash Neck Banded)</i>			
horizontal neck banded rows-diagonal appliqued ridge-adjacent diagonal incised line	-	1	1
<i>Punctated</i>			
1+ fingernail punctated row (Emory Punctated-Incised)	1	-	1
fingernail punctated row, mid-rim	1	-	1
1+ tool punctated row	-	1	1
2+ tool punctated rows	-	1	1
3+ tool punctated rows at the base of the rim	1	-	1
<i>Trailed (Foster Trailed-Incised)</i>			
curvilinear trailed lines	-	1	1
parallel trailed lines	-	1	1
Fine Ware			
<i>Engraved</i>			
parallel engraved lines-cross-hatched pendant triangle el.	-	1	1

Table 40. Shell-tempered decorated sherds and decorated elements below Zone H and above Zone I., cont.

Decorative method and element	Rim	Body	N
scroll fill zones filled with horizontal or diagonal hatched lines (Barkman Engraved)	-	1	1
<i>Engraved-Red-Slipped</i>			
1-2+ widely-spaced horizontal engraved lines-int./ext. red-slipped	-	2	2
semi-circular engraved el.-int./ext. red-slipped (Avery Engraved)	-	1	1
interior engraved circle el.-int./ext. red-slipped (Bowie Engraved)	-	1	1
<i>Red-Slipped</i>			
int./ext. red-slipped	-	5	5
Totals	4	26	39

Forty-five percent of the shell-tempered fine ware sherds in below Zone H and above Zone I have a red slip on both interior and exterior vessel surfaces (see Table 40). These may be from Clement Redware vessels as well as the non-engraved portions of engraved-red-slipped vessels, including Avery Engraved and Bowie Engraved vessels; almost 37 percent of the fine ware vessels in these zones are both red-slipped as well as engraved. The remainder of the fine wares are two body sherds, one from a Barkman Engraved, *var. Clear Lake* vessel with scroll elements (see Table 40).

Zone I Decorated Sherd Elements

Zone I, and Zone J below it, together represent the construction zones for the initial primary platform in the mound at the Hatchel site. Neither zone has evidence for structures, and there are only low densities of decorated sherds in both zones. These sherds likely originated from village deposits that were gathered up for mound fill.

There are a variety of grog-tempered utility ware vessel sherds in Zone I, including body sherds with applied nodes, fillets, and ridges from Moore Noded (see Webb 1959), McKinney Appliqued, and Nash Neck Banded jars (Table 41). The brushed and brushed-incised sherds are from vessels with horizontal brushing on the rim and probable vertical brushed bodies, likely from Karnack Brushed-Incised, *var. Karnack* vessels (see Schambach and Miller 1984:123).

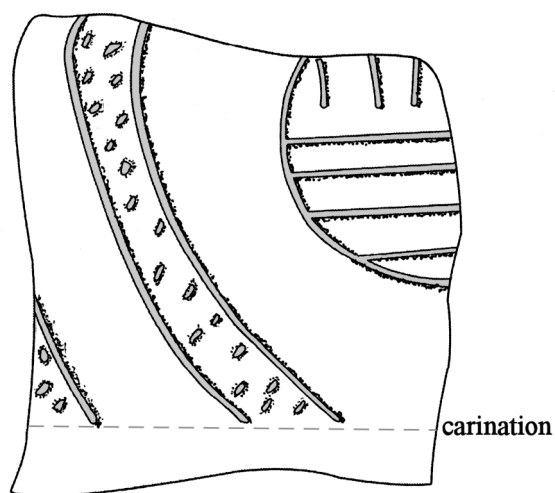
The incised sherds include rims with several horizontal incised lines and body sherds with parallel, diagonal and curvilinear, and diagonal hatched elements; the latter is from a Foster Trailed-Incised vessel (see Table 41). In addition to post-A.D. 1450 ceramic sherds in the Zone I assemblage, there is one lower rim sherd from a Crockett Curvilinear Incised carinated bowl with curvilinear incised zones filled with tool punctations and a circle element filled with horizontal and vertical incised lines (Figure 108).

Table 41. Grog-tempered decorated sherds and decorated elements in Zone I.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Appliqued</i>			
appliqued rattle node	-	1	1
straight appliqued fillet	-	1	1
straight appliqued ridge	-	2	2
<i>Brushed</i>			
horizontal brushed marks	2	-	2
<i>Brushed-Incised</i>			
parallel brushed-incised marks and lines	-	1	1
<i>Incised</i>			
diagonal and curvilinear incised lines	-	1	1
diagonal hatched zone	-	1	1
2+ horizontal incised lines	1	-	1
3+ horizontal incised lines	1	-	1
5+ horizontal incised lines	1	-	1
opposed incised lines	-	1	1
parallel incised lines	-	3	3
parallel and diagonal opposed incised lines	-	1	1
<i>Incised-Punctated</i>			
curvilinear incised zones with tool punctations and circle el. filled with horizontal and vertical incised lines (Crockett Curvilinear Incised)	1	-	1
<i>Neck Banded (Nash Neck Banded)</i>			
horizontal neck bands	1	-	1
<i>Punctated</i>			
finger nail punctated rows	-	2	2
alternate rows of finger nail and tool punctations	-	1	1
vertical tool punctated rows	1	-	1
<i>Ridged-Brushed (Belcher Ridged)</i>			
parallel ridge-parallel brushed marks between ridges	-	1	1

Table 41. Grog-tempered decorated sherds and decorated elements in Zone I, cont.

Decorative method and element	Rim	Body	N
Fine Ware			
<i>Engraved</i>			
1+ horizontal engraved line	2	1	3
2+ horizontal engraved lines, widely-spaced	-	2	2
horizontal and diagonal engraved-excised lines	1	-	1
horizontal-diagonal engraved lines-excised circle el.	-	1	1
closely-spaced parallel engraved lines	-	1	1
widely-spaced parallel engraved lines	-	1	1
<i>Engraved-Punctated</i>			
curvilinear engraved line and zone of excised punctations (cf. Bailey Engraved)	-	1	1
horizontal engraved line below excised punctated row	-	1	1
horizontal engraved lines-horizontal hatched column-zone with excised punctations (Barkman Engraved)	1	-	1
<i>Red-Slipped</i>			
int./ext. red-slipped	-	1	1
Totals	12	25	37

**Figure 108. Crockett Curvilinear Incised lower rim sherd from a carinated bowl in Zone I at the Hatchel platform mound.**

Other grog-tempered utility wares in Zone I include a Nash Neck Banded rim sherd, sherds with rows of fingernail or tool punctations, and a Belcher Ridged, *var. Bryam's Ferry* body sherd (see Table 41). This is an earlier variety of Belcher Ridged with brushed marks between vertical ridged bodies (see Girard 2007).

The fine ware sherds in Zone I include engraved, engraved-punctated, and red-slipped rim and body sherds from post-A.D. 1450-1500 wares. Those that can be classified include a bottle sherd from a vessel that compares favorably to Bailey Engraved, while a rim sherd is from a Barkman Engraved vessel with horizontal engraved lines divided by a horizontal hatched column, and a zone of excised punctations between the engraved lines and the hatched column (see Suhm and Jelks 1962:Plate 4d).

The one decorated grog-bone-tempered sherd in Zone I is from a Foster Trailed-Incised, *var. Foster* jar (Table 42). According to Schambach and Miller (1984:121), "The Foster variety looks like a good late Caddo IV marker," or a Late Caddo period ceramic type that dates at the Hatchel site after ca. A.D. 1450-1500 or thereabouts.

Table 42. Grog-bone-tempered decorated sherds and decorated elements in Zone I.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Trailed-Incised (Foster Trailed-Incised)</i>			
2+ sets of short diagonal incised lines-horizontal trailed line between sets	-	1	1
Totals	-	1	1

Two of the decorated sherds in Zone I are from shell-tempered utility ware vessels (Table 43). These are the deepest and earliest shell-tempered vessel sherds in the Hatchel platform mound ceramic assemblage. They are from Karnack Brushed-Incised and Nash Neck Banded jars.

Zone J Decorated Sherd Elements

Zone J is the lowermost and primary construction zone in the primary platform mound at the Hatchel site, resting on either Zone K or the Above Zone K deposits; the latter is a mound fill, and not associated with archaeological deposits in natural sediments below the mound. There are grog-, grog-bone, and bone-tempered decorated sherds from utility and fine wares in this zone, and they are a mixture of pre-A.D. 1200 sherds and post-A.D. 1450 sherds, indicating that Texarkana phase village areas were already in existence in the vicinity of where the primary platform mound was to be constructed, and these deposits served as a source of mound fill along with other areas that had Early to Middle Caddo period habitation deposits (i.e., Village Area II, see Perttula and Nelson

Table 43. Shell-tempered decorated sherds and decorated elements in Zone I.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Brushed (Karnack Brushed-Incised)</i> parallel brushed	-	1	1
<i>Neck Banded (Nash Neck Banded)</i> horizontal neck banded rows	-	1	1
Totals	-	2	2

2003:Table 15) dating from cal. A.D. 1020-1280 (2 sigma). Similar aged-deposits are present at the nearby Mitchell site (41BW4): cal. A.D. 1158-1262 (2 sigma, Perttula 2014b:83).

At least two grog-tempered incised-punctated rim and body sherds are from Early Caddo period Crockett Curvilinear Incised vessels (Table 44 and Figure 109a-b). One horizontal engraved body sherd of the same age has been identified as coming from a Hickory Engraved vessel; several other horizontal engraved rim sherds may also be from Hickory Engraved vessels. Post-A.D. 1450 sherds in Zone J include two Keno Trailed bottle sherds with multiple curvilinear trailed lines (Table 44).

There is only a single decorated grog-bone-tempered sherd in Zone I. The sherd has at least two rows of horizontal incised lines (Table 45), and is not typed. The one bone-tempered decorated sherd in Zone J is from a utility ware vessel with diagonal incised (or triangular-shaped) zones filled with tool punctations (Table 46).

The one bone-tempered decorated sherd in Zone J is from a utility ware vessel (Table 46). The body sherd has diagonal incised lines (likely part of a triangular zone) filled with tool punctations.

Above Zone K Decorated Sherd Elements

There are Late Caddo period, Texarkana phase decorated sherds from grog-tempered vessels in the Above Zone K ceramic assemblage (Table 47), indicating that (1) these deposits represent the earliest primary platform mound deposits above the Zone K deposits beneath the mound, and that the primary platform mound began to be quickly constructed by ca. A.D. 1450-1500 or thereabouts. They include a grog-tempered Moore Noded rim sherd (Figure 110), parallel brushed sherds (likely from Karnack Brushed-Incised vessels), Taylor Engraved, and Simms Engraved fine ware vessel sherds (Table 47).

Table 44. Grog-tempered decorated sherds and decorated elements in Zone J.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Incised</i>			
closely-spaced parallel incised lines	-	1	1
parallel incised lines	-	4	4
closely-spaced vertical incised lines	-	1	1
<i>Incised-Punctated</i>			
curvilinear incised zones with tool punctations (Crockett Curvilinear Incised)	-	1	1
horizontal incised lines and semi-circular zone with tool punctations (Crockett Curvilinear Incised)	1	-	1
horizontal incised lines with tool punctated rows between lines	-	1	1
horizontal incised lines above 2 tool punctated rows at rim-body juncture	-	1	1
horizontal-diagonal incised lines-tool punctated row	-	1	1
horizontal-vertical incised lines	-	1	1
<i>Punctated</i>			
finger nail punctated rows	1	1	2
Fine Ware			
<i>Engraved</i>			
hatched bracket el.	-	1	1
horizontal engraved lines (Hickory Engraved)	-	1	1
1+ horizontal engraved line	1	-	1
2+ horizontal engraved lines	1	-	1
3+ horizontal engraved lines	1	-	1
straight engraved line	-	1	1
<i>Trailed (Keno Trailed)</i>			
multiple curvilinear trailed lines	-	2	2
Totals	5	17	22

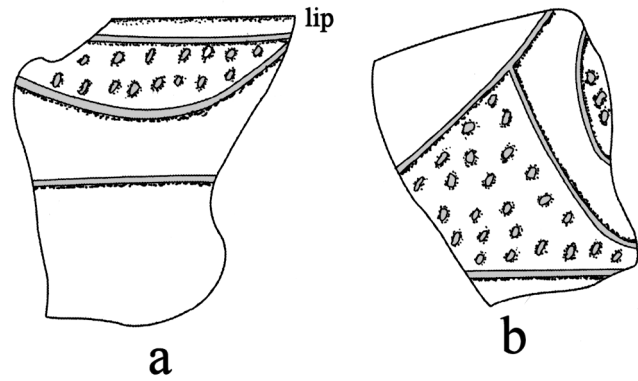


Figure 109. Grog-tempered rim and body sherds with zoned incised-punctated elements (Crockett Curvilinear Incised) in Zone J.

Table 45. Grog-bone-tempered decorated sherds and decorated elements in Zone J.

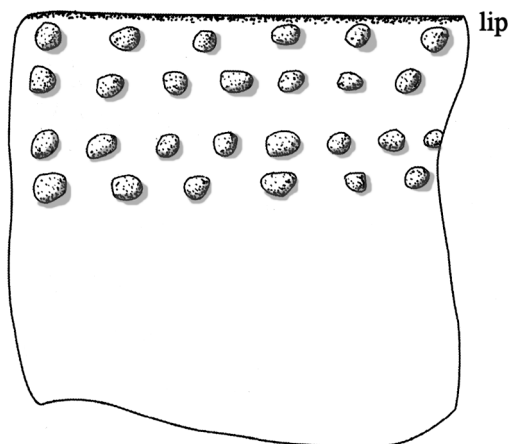
Decorative method and element	Rim	Body	N
Utility Ware			
<i>Incised</i>			
2+ horizontal incised lines	1	-	1
Totals	1	-	1

Table 46. Bone-tempered decorated sherds and decorated elements in Zone J.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Incised-Punctated</i>			
diagonal incised lines and zone filled with tool punctations	-	1	1
Totals	-	1	1

Table 47. Grog-tempered decorated sherds and decorated elements in Above Zone K.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Applied</i>			
4 rows of applied nodes	1	-	1
straight applied ridge	-	1	1
<i>Brushed</i>			
parallel brushed	-	2	2
<i>Incised</i>			
horizontal incised lines	2	-	2
straight incised line	-	1	1
Fine Ware			
<i>Engraved</i>			
curvilinear engraved lines, multiple and circle el. (Taylor Engraved)	-	1	1
2+ horizontal engraved lines	1	-	1
multiple horizontal-curvilinear engraved lines	-	1	1
straight engraved line	-	1	1
<i>Engraved-Punctated</i>			
horizontal engraved line-horizontal row of excised punctations (Simms Engraved)	-	1	1
Totals	4	8	12

**Figure 110. Rim sherd with rows of applied nodes in Above Zone K at the Hatchel site.**

The one grog-bone-tempered sherd in Above Zone K is a body sherd with a straight applied ridge (Table 48). The only bone-tempered decorated sherd in Above Zone K is a red-slipped fine ware body sherd, either from a bowl or a carinated bowl (Table 49). The body sherd is from a vessel with a red slip on both interior and exterior vessel surfaces.

Table 48. Grog-bone-tempered decorated sherds and decorated elements in Above Zone K.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Appliqued</i> straight applied ridge	-	1	1
Totals	-	1	1

Table 49. Bone-tempered decorated sherds and decorated elements in Above Zone K.

Decorative method and element	Rim	Body	N
Fine Ware			
<i>Red-Slipped</i> int./ext. red-slipped	-	1	1
Totals	-	1	1

Zone K and Below Zone K Decorated Sherd Elements

Zone K represents a natural sediment zone under the primary platform mound. The one structure identified directly under the western part of the platform mound (Feature 25) is a very large circular structure, 14.98 m in diameter (Figure 111). Feature 25 also had an interior partition marked by an arc of post holes cutting across the northern part of the floor (TARL n.d.:401).

In addition to Feature 25 in Zone K, there is evidence of other structural features in these pre-mound deposits. These include two areas with partial alignments of post holes exposed in two trenches east and well east of Feature 25, along with a 9.2 m long ash deposit about 27 m northeast of Feature 25, near what became the central part of the platform mound when it was constructed.

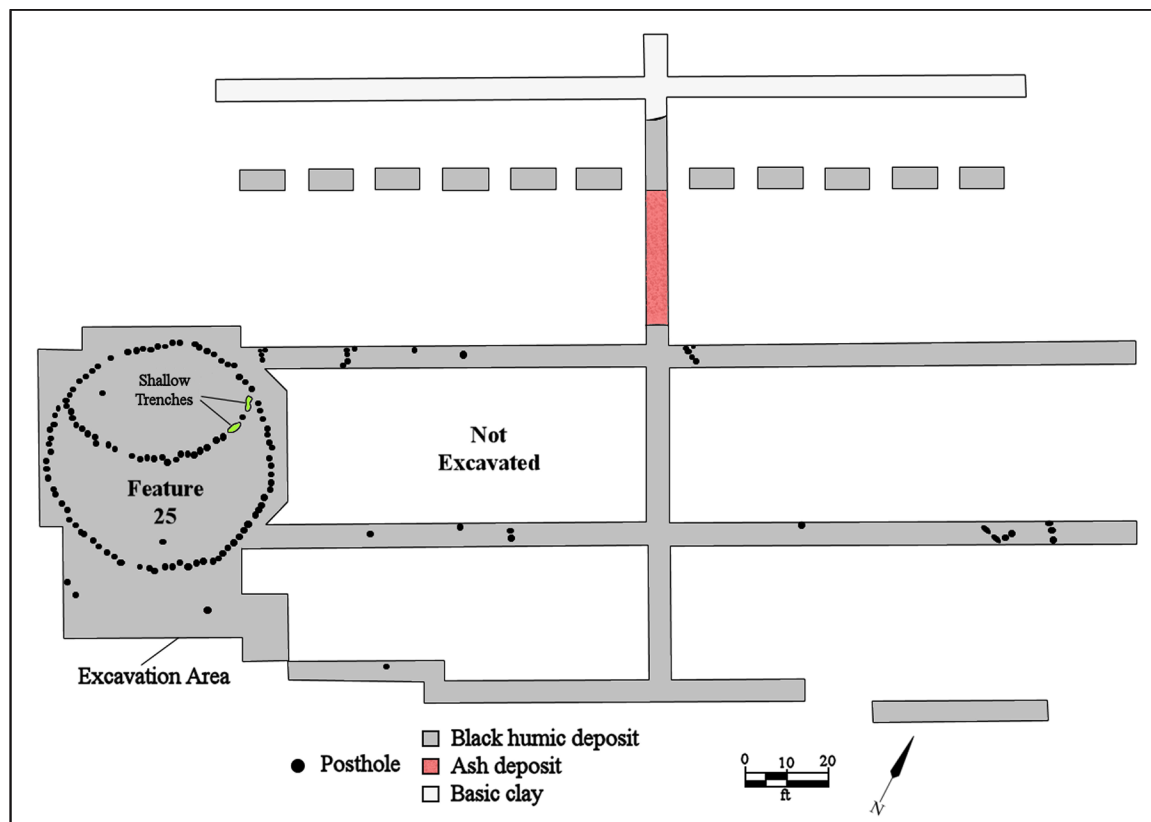


Figure 111. Plan of Zone K underneath the Hatchel site platform mound.

This ash deposit likely represents the floor of another specialized structure, perhaps analogous to the cal. A.D. 1161-1254 ash-laden floor of the “House of the Priest” at the Crenshaw site (3MI6) on the Red River (Jackson et al. 2012). Relevant calibrated dates from Early to Middle Caddo period deposits in Village Area II at the Hatchel site and on a Dunkin Incised sherd in midden deposits at the Mitchell site (41BW4) range from A.D. 1020-1280.

The decorated utility ware and fine ware sherds from Zone K and below Zone K deposits are all from grog-tempered vessels (Table 50) consistent with a pre-A.D. 1300 component under the primary platform mound. Best represented are rim and body sherds from Pennington Punctated Incised (Figure 112c) and Crockett Curvilinear Incised (Figure 113a-d) vessels, along with a Haley Engraved bottle sherd (Figure 112b).

Sherds with multiple horizontal incised lines may be from Davis Incised or Dunkin Incised vessels (see Table 50). One rim sherd from a likely Holly Fine Engraved vessel in Zone K has an engraved scroll motif with vertical divider elements and upper and lower scroll fill zones (see Figure 112a; see Suhm and Jelks 1962:Plate 40b).

Decorated Sherds from Levels and Layers with No Zone Association

As noted above, a number of levels and layers in the excavations could not be assigned to a specific floor or mound zone by the WPA archaeologists. Generally, these levels and layers are along the peripheries of the excavations at various depths atop the platform mound. Their provenience

Table 50. Grog-tempered decorated sherds and decorated elements in Zone K and Below Zone K.

Decorative method and element	Rim	Body	N
Utility Ware			
<i>Appliqued</i>			
straight appliqued ridge	-	1	1
<i>Incised</i>			
curvilinear incised lines and scratched large pendant triangle el. (Crockett Curvilinear Incised)	1	-	1
diagonal incised lines with diagonal hatched zone (Crockett Curvilinear Incised)	-	1	1
3+ horizontal incised lines	1	-	1
6+ horizontal incised lines	1	1	
9+ horizontal incised lines	1	-	1
horizontal incised lines, diagonal opposed hatched circle el. and curvilinear triangle el. (Crockett Curvilinear Incised)	1	-	1
horizontal incised lines-incised slanted scroll line and hatched scroll fill zones (Crockett Curvilinear Incised)	1	-	1
parallel incised lines	-	2	2
7+ parallel incised lines	-	1	1
<i>Incised-Punctated</i>			
horizontal incised lines, diagonal incised columns filled with tool punctations, and semi-circular incised zone filled with punctations (Pennington Punctated-Incised)	1	-	1
Fine Ware			
<i>Engraved</i>			
closely-spaced curvilinear-diagonal engraved lines-circle el. with excised punctations (Haley Engraved)	-	1	1
multiple curvilinear engraved lines	-	1	1
3+ horizontal engraved lines	1	-	1
4+ horizontal engraved lines	1	-	1
slanted scroll-scroll fill zones-vertical bracket divider	1	-	1
Totals	9	8	17

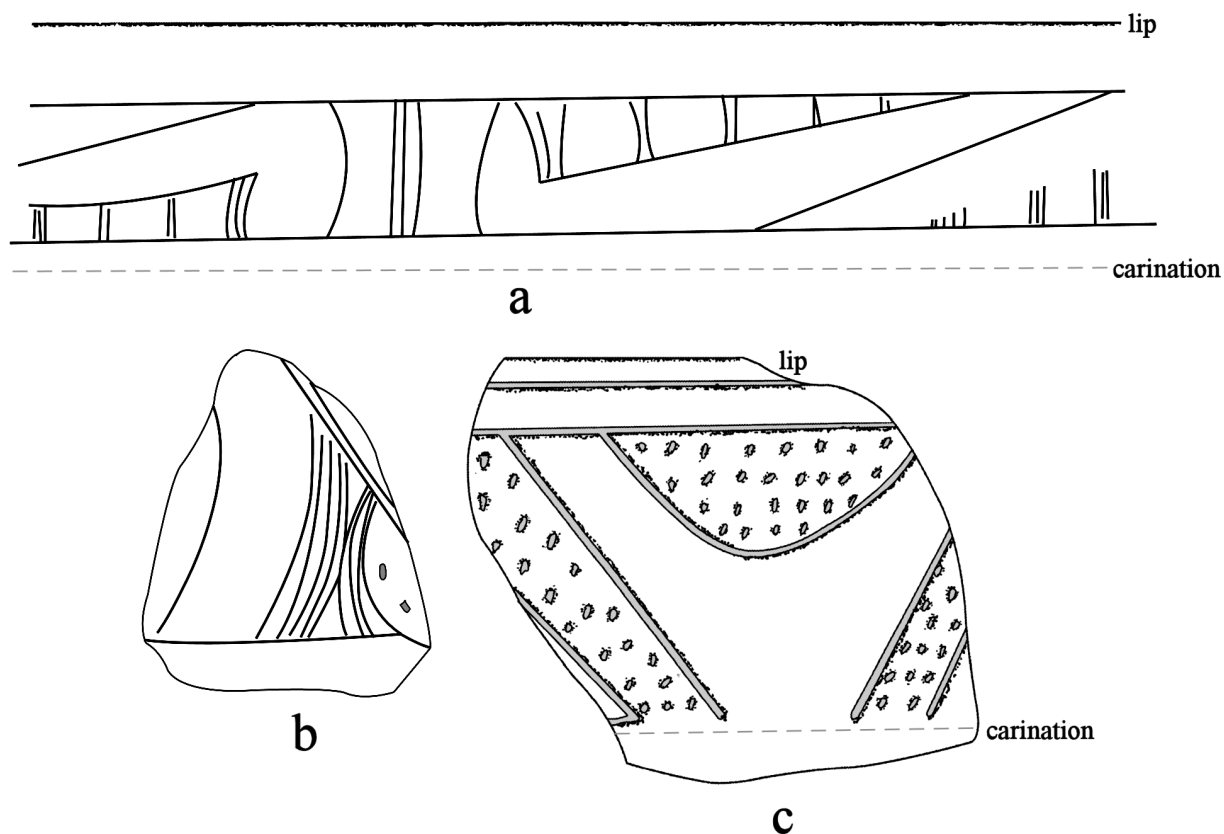


Figure 112. Engraved and incised-punctated grog-tempered sherds from Zone K at the Hatchel mound excavations.

is described by level and layer, with five 1 ft. layers per level. From these zones, a total of 1304 ceramic vessel sherds have been recovered (see Appendix 2), including sherds from plain ware (66 percent), utility ware (21 percent), and fine ware (13 percent) vessels. About 89 percent of these sherds are from grog-tempered vessels, another 5.7 percent are from grog-bone-tempered vessels, 4.4 percent are from shell-tempered vessels, and only 1.0 percent are from bone-tempered vessels. Not too surprisingly, these proportions are quite comparable to the vessel sherds from zones A to K in the primary platform mound (see Table 1).

A few other sherds ($n=3$) have no provenience in the mound excavations. One is a Middle Caddo period grog-tempered Haley Engraved bottle sherd with horizontal and curvilinear engraved lines, the latter with excised spur elements (Figure 114a). Another grog-tempered sherd is from a post-A.D. 1550 Hodges Engraved vessel (Figure 114b). A third grog-tempered sherd has a diagonal-diagonal opposed engraved hatched element.

Sherd Fitters

A number of sherds from the same vessel from different proveniences in the mound zones at the Hatchel site could be fitted together, and the distribution of the sherd fitters provides significant information on the movement of broken vessels in and between different zones (Table 51).

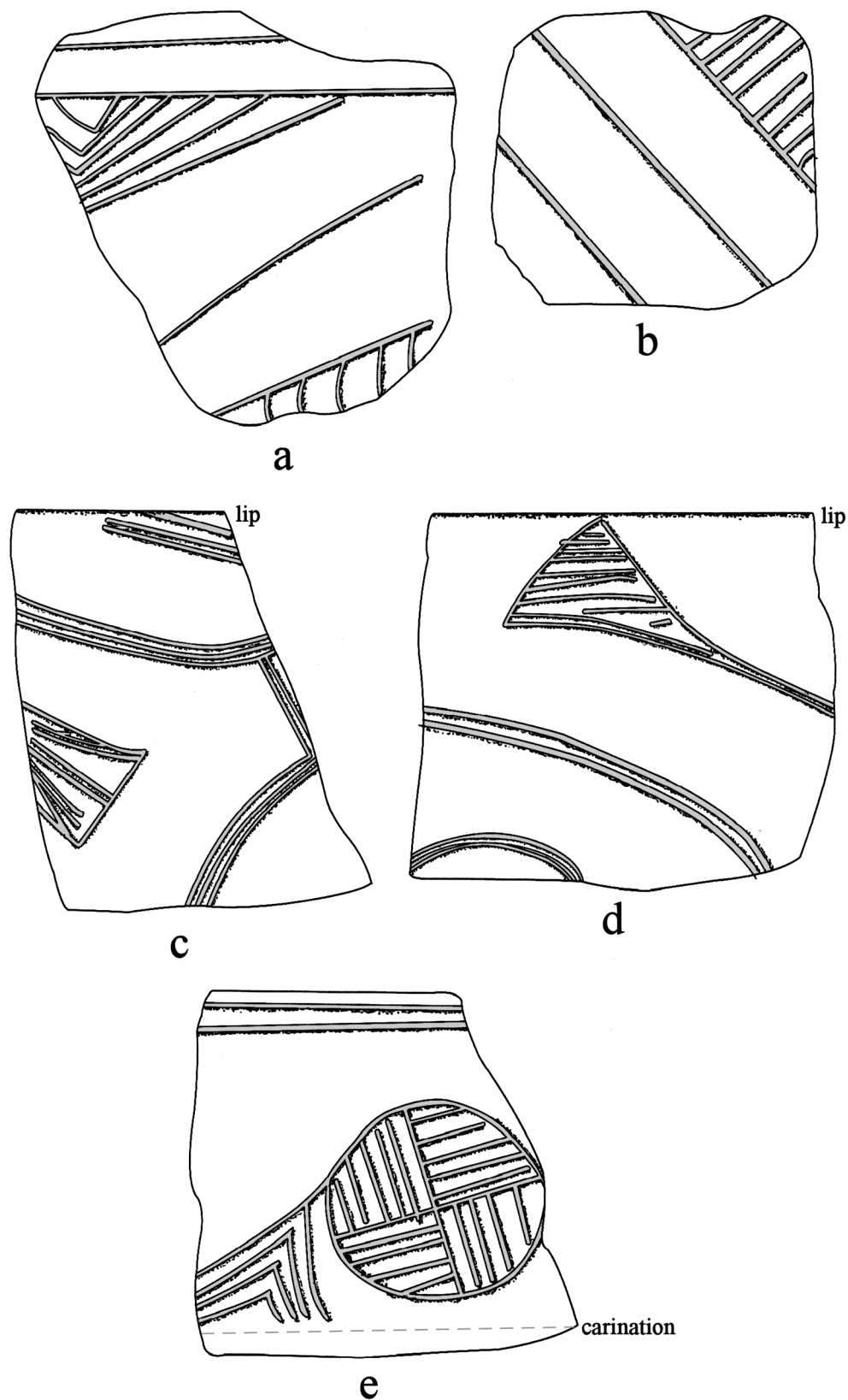


Figure 113. Crockett Curvilinear Incised rim and body sherds from Zone K at the Hatchel mound excavations.

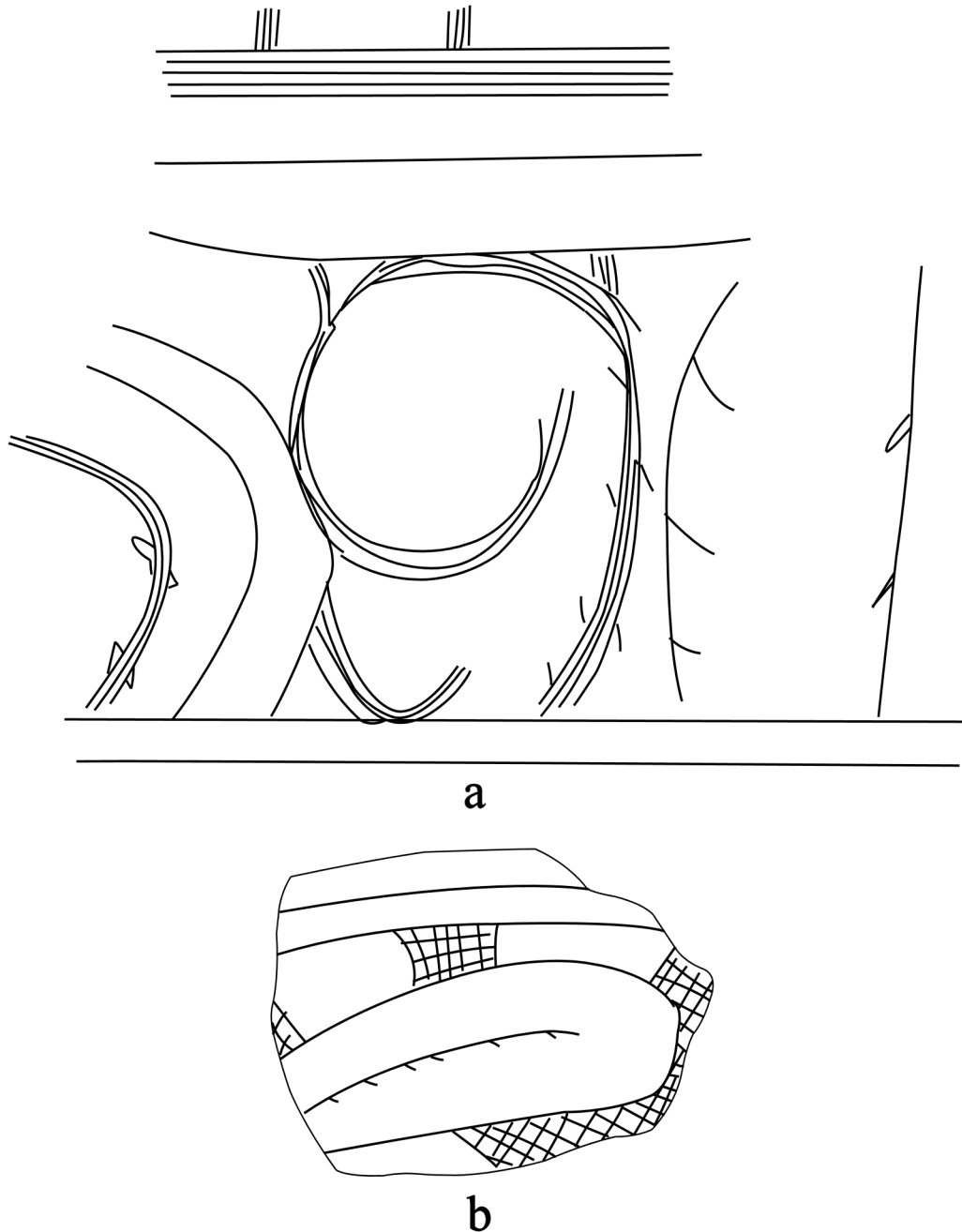


Figure 114. Engraved sherds with no provenience in the Hatchel Mound excavations: a, Haley Engraved; b, Hodges Engraved.

More than 61 percent of the sherd fitters in the assemblage are sherds from different proveniences in Zone G or Zone H (see Table 51), suggesting considerable movement of broken vessels across these two mound zones as they accumulated and/or were built up. Furthermore, about 73 percent of the sherd fitters are sherds from different proveniences in the same zones, hinting at the fundamental stratigraphic integrity of the mound zones. The remaining fitter sherds are from vessels that occur in different mound zones: in most cases, the fitters are from adjacent zones (n=14), or are

Table 51. Sherd fitters in the platform mound zones at the Hatchel site.

Zone of fitter sherds	No. of sherds
Zone A-Zone B	2
Zone B-Zone B	2
Zone B-Zone H	1
Zone C-Zone C	1
Zone D-Zone D	2
Zone D-Zone E	1
Zone D-Zone F-Zone G	1
Zone D-Zone G	1
Zone E-Zone E	1
Zone E-Zone F	1
Zone E-Zone G	1
Zone F-Zone F	3
Zone F-Zone G	2
Zone F-Zone G-Zone H	1
Zone F-Zone H	1
Zone F-Zone K	1
Zone G-Zone G	22
Zone G-Zone H	6
Zone H-Zone H	36
Zone H-Below Zone H	3
Zone Below H-Zone Below H	1
Zone Below H-Zone I	1
Zone Above I-Level 1, layer 2	1
Level 1, layer 1-Level 1, layer 1	1
Level 1, layer 1-Level 1, layer 2	1
Totals	94

two zones apparent (i.e., Zone F and Zone H, n=4). Only 4 percent of the sherd fitters are from three (n=2), five (n=1), or six (n=1) zones apart, where sherds from the same vessels were moved significant vertical distances during mound use and mound fill accumulation.

Vessel Sherd Appendages

Vessel pedestals and pedestal leg sherds are present in a number of the zones in the platform mound at the Hatchel site (Table 52), particularly in zones D, G, and H. These vessel pedestals and pedestal legs are likely from pedestal bowls with applied decorations on the vessel bodies along with rattle knobs (Webb 1959:Figure 122p). Approximately 82 percent of these are from vessels tempered solely with grog, and the others are from vessels tempered with grog and bone or simply

Table 52. Vessel sherd appendages in the different zones in the Hatchel Mound excavations.

Zone	Temper	Description
D	grog	pedestal leg sherd; 25.0 mm in diameter
D	grog	pedestal leg sherd; 31.0 mm in diameter
F	grog	pedestal and leg sherd; leg is 16.0 mm in diameter; pedestal width, 16.0 mm
Below F	grog diameter	pedestal leg sherd with flat base; 28 mm in
G	grog	pedestal leg sherd with rounded base; 18.1 mm in diameter
G	grog	pedestal leg sherd; 11.0 mm in diameter
G	bone	pedestal leg sherd; 25.0 mm in diameter
H, Fea. 18	grog	pedestal leg sherd with rounded base; 23.2 mm in diameter
H, under Fea. 19-20	grog-bone	pedestal leg sherd
Below H	grog	pedestal leg sherd; 21.0 mm in diameter
Above K	grog	pedestal leg sherd, 19 mm in diameter

with burned bone temper. The pedestal legs range from 11.0-31.0 mm in diameter, and have either flat or rounded bases; the one measurable pedestal is 16.0 mm in width.

The last vessel appendage is a ceramic duck effigy head sherd from an effigy bowl (Figure 115); the head has three curvilinear trailed lines, while the beak is marked by five short diagonal engraved lines. This grog-tempered effigy vessel was discarded in Feature 6 in Zone B.

Use of Red or White Clay Pigments

Caddo potters made ceramics in a wide variety of vessel shapes, employing distinctive technological traditions of temper choice, surface finishing techniques, and firing conditions, along with an abundance of well-crafted and executed body and rim designs and surface treatments. From the archaeological contexts in which Caddo ceramics have been found, as well as inferences about their manufacture and use, it is evident that ceramics were important to the Caddo in the cooking and serving of foods and beverages; in the storage of foodstuffs; as personal possessions; as beautiful works of art and craftsmanship (i.e., some vessels were clearly made to never be used in domestic

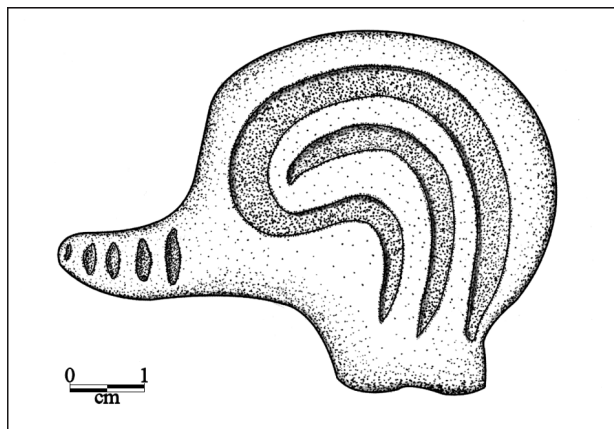


Figure 115. Ceramic duck effigy head sherd (FS 216) in Feature 6, Zone B, in the Hatchel site platform mound.

contexts); and as social identifiers. Certain shared and distinctive stylistic motifs and decorative patterns marked closely related communities and constituent groups. Other motifs may have originally been more personal, perhaps deriving from body tattoo motifs.

The Caddo made both fine wares with engraved and slipped decorative elements, with burnished or polished surfaces, including bottles and many bowls of different forms, and utility wares with wet paste decorative elements (i.e., brushed, incised, punctated, etc.). These kinds of ceramics were designed to serve different purposes within Caddo communities and family groups—from that of a cooking pot to the mortuary function of a ceremonial beaker—and this is reflected in differences in paste, surface treatment, firing methods, decoration, and vessel form between the two wares. Decorations and slips, both red (*Hatinu*) and black (*hadikuh*) were added before, as well as after, baking in an open fire, and commonly the vessels were then burnished and polished; red ochre and white (*hakaayuh*) kaolinite clay pigments were often added to the decorations on bottles and carinated bowls; green (*hasahkuh*) pigments have also been documented on some engraved vessels (see Fields and Gadus 2012:Table 6-3). Webb (1959:157) noted that a number of vessels at the Belcher site (16CD13) had a “pale green pigment...smeared irregularly on the surface of 15 burial vessels.”

The goals of this section are straightforward. First, I will examine the use of clay pigments in the ceramic vessel sherd assemblages from the Late Caddo period stratified platform mound at the Hatchel site (41BW3) on the Red River in Bowie County, Texas (Perttula 2014a, 2015a), then discuss the variable occurrence of either red or white clay pigments on different fine ware vessel forms at the site. Finally, although not comprehensive (that effort still awaits), I consider the spatial and temporal diversity in clay pigment use among different Caddo sites and communities in East Texas.

Use of Clay Pigments at the Hatchel Site

Red and white clay pigments on ceramic vessel sherds are present in almost all of the different platform mound zones (Zones A-J) at the Hatchel site, and in the pre-mound habitation zone (Zone K). Based on the range of decorated sherds and vessels in the various zones, the pre-mound Zone K likely dates about ca. A.D. 1200, while the initial platform mound zones (I-J) date from ca. A.D. 1450-1500, just before Zone H in the platform mound. Zones E-H likely date from ca. A.D. 1500-1600, and the latest platform mound zones (A-D) date from ca. A.D. 1600-1691. The Teran expedition of 1691 visited the Nasoni Caddo community on the Red River that includes the Hatchel

site and mapped the earthen mound with a *templo* or temple structure on it that is believed to be the platform mound at the Hatchel site (Sabo 2012:438 and Figure 15-1).

There are 337 ceramic vessel sherds with either red (n=135), red and white (n=1), or white (n=201) clay pigments in the mound zones (Table 53). The pigments were used on bottles, carinated bowls, and compound bowls. By far the largest numbers of sherds with pigments are in zones G and H, but these zones also have the highest number of decorated sherds (Pertulla 2014a:Table 1). About 5.9 percent of the decorated sherds from Zone G have a clay pigment, compared to 9.4 percent in Zone H. In fact, the proportion of sherds with pigments in zones E-H is 7.3 percent, compared to 4.5 percent in zones below H-J, 2.9 percent in Zone K, and only 1.6 percent in zones A-D. The use of clay pigments by Caddo potters on ceramic vessels declined considerably after ca. A.D. 1600, after having peaked in use between ca. A.D. 1500-1600.

The use of clay pigments by zone and temporal periods at the Hatchel site was not consistent, but changed through time. In the mound itself, by proportion, red pigments were most commonly

Table 53. Clay pigments on vessel sherds from mound zones at the Hatchel site.*

Zone	red pigment		red-white pigment	white pigment	
	Bt	CB/CPB		Bt	CB/CPB
A	1	-	-	-	-
B	2	4	-	-	-
C	-	-	-	-	-
D	1	1	-	1	3
E	3	-	1	-	1
F	3	2	-	1	14
G	6	8	-	3	37
H	37	42	-	9	114
below H	12	6	-	-	15
I	-	-	-	-	-
J	-	1	-	1	-
above K	-	-	-	-	1
K	-	1	-	-	-
Totals	65	65	1	15	185

*six sherds are from deposits that cannot be associated with a zone in the platform mound. Five have red pigment and one has a white clay pigment.

Bt=bottle; CB=carinated bowl; CPB=compound bowl

used after ca. A.D. 1600, as 69 percent of the sherds with pigment had a red clay pigment (Table 54). In the earliest platform zones, dated ca. A.D. 1450-1500, about 53 percent of the sherds with pigment in the assemblages had a red clay pigment. Conversely, between ca. A.D. 1500-1600, sherds with a red clay pigment comprise only 36 percent of the assemblages; the one sherd with both red and clay pigments also occurred at this time. The use of a white kaolin clay pigment peaked between ca. A.D. 1500-1600, as 64 percent of the sherd sample with pigment had the white pigment smeared in the engraved lines (Table 54). The use of white clay pigment dropped to 31 percent after ca. A.D. 1600.

Table 54. Clay pigment use by zones and temporal periods in the platform mound at the Hatchel site.

Zones/temporal periods	Pigments			
	Red	Red-White	White	N
A-D/ca. A.D. 1600-1691	9	-	4	13
E-H/ca. A.D. 1500-1600	101	1	179	281
below H-above K/ca. A.D. 1450-1500	19	-	17	36
K/ca. A.D. 1200	1	-	-	1
Totals	130	1	200	331

A red clay pigment was preferred by Caddo potters at the Hatchel site for use on bottles, especially between ca. A.D. 1450-1500 and after ca. A.D. 1600 (Table 55). The use of a white clay pigment on bottles was most common between ca. A.D. 1500-1600, as 21 percent of the bottle sherds with evidence of pigment use had a white clay pigment during this period. In the case of carinated bowls and compound bowls at the Hatchel site, a white clay pigment was more regularly used on these vessel forms. In the ca. A.D. 1450-1500 deposits, carinated bowls and compound bowls with a white pigment comprise 70 percent of the sherds from these vessel forms, compared to 76 percent of the sherds in the ca. A.D. 1500-1600 deposits, but only 37.5 percent of the sherds from these vessel forms in the ca. A.D. 1600-1691 mound zones (Table 55).

Pigment use at the Belcher site (16CD13) on the Red River in northwestern Louisiana, contemporaneous with the use of the Hatchel platform mound, was also extensive. More than 63 percent of the 116 engraved ceramic vessels in the Belcher phase component at the site had pigments in the engraved lines (Webb 1959:157). Webb noted a correlation between vessel forms, ceramic types, and use of either white or red pigment. Bowls of the Belcher Engraved type had white pigment, while bottles of the Hodges Engraved type had red pigment. In the vessel assemblage as a whole, 36 engraved bottles and bowls had red pigment, while 37 bowls and effigy bowls had white pigment (Webb 1959:157).

Use of Clay Pigments at other East Texas Caddo Sites

For comparative purposes, I compiled information on the use of clay pigments in several Early Caddo, Middle Caddo, Late Caddo, and Historic Caddo period ceramic vessel assemblages in East

Table 55. Clay pigment use by vessel forms and zones/temporal periods.

Temporal period	Pigments				
	Red Bt	CB/CPB	Red-White CB	White Bt	CB/CPB
ca. A.D. 1600-1691	4	5	-	1	3
ca. A.D. 1500-1600	49	52	1	13	166
ca. A.D. 1450-1500	12	7	-	1	16
ca. A.D. 1200	-	1	-	-	-
Unassociated zones	4	1	-	-	1
Totals	69	66	1	15	186

Bt=bottle; CB=carinated bowl; CPB=compound bowl

Texas; many other assemblages warrant study for clay pigment use, but this research awaits completion. This includes the Middle Caddo period Washington Square Mound and Sanders sites (Perttula et al. 2010, 2016); the Pine Tree Mound and Mockingbird Late Caddo, Titus phase, sites (Fields and Gadus 2012; Perttula et al. 1998), Late Caddo Frankston phase vessels from the upper Neches River basin (Perttula 2011); and Historic Caddo vessel assemblages at the Goode Hunt and Clements sites (Perttula 2015b).

About 27 percent of the engraved vessels from Early Caddo period features at the George C. Davis site (41CE19) on the Neches River have clay pigments rubbed in engraved decorative elements. Of these vessels, 86 percent have a red clay pigment (Table 56); the red pigment was clearly preferred by the Caddo potters at the George C. Davis site, particularly on Holly Fine Engraved vessels (Perttula 2016b). The red clay pigment was added to one Hickory Engraved jar, two Holly Fine Engraved bottles, two Holly Fine Engraved bowls, and one Holly Fine Engraved carinated bowl. The one vessel with a white clay pigment in the assemblage is a Holly Fine Engraved bottle. In the case of the Middle Caddo period vessel assemblages, about 21 percent of the engraved vessels at each site had a clay pigment rubbed in the engraved lines. Between 60-75 percent of these vessels have a red pigment (Table 57). At the Washington Square site, bottles and carinated bowls have red pigment, while the white pigment was applied to the engraved lines of two compound bowls (Perttula et al. 2010). Carinated bowls and bowls at the Sanders site have a red clay pigment, and one carinated bowl has a white clay pigment (Perttula et al. 2016).

At the Pine Tree Mound site, pigment use in the engraved fine wares was quite common, as 56 percent of the engraved vessels had an applied pigment (Fields and Gadus 2012:Table 6-3). Although pigment use was rather equally spread between the red and white clay pigments in the vessel assemblage, unlike the other assemblages discussed in the text except for the ca. A.D. 1450-1500 deposits at the Hatchel platform mound (see Tables 54-55), almost all the bottles (86 percent) had a red clay pigment, while 86 percent of the carinated bowls and 89 percent of the compound bowls had the white clay pigment, one of the highest proportion of white clay pigment use in these

Table 56. Clay Pigment use in a sample of other ancestral Caddo sites in East Texas.

Site	Red pigment	White pigment
<i>Early Caddo period</i>		
George C. Davis (41CE19)	6	1
<i>Middle Caddo period</i>		
Sanders (41LR2)	3	1
Washington Square (41NA49)	3	2
<i>Late Caddo period</i>		
Pine Tree Mound (41HS15)	21	24
Mockingbird (41TT550)	1	19
Upper Neches, A.D. 1400-1560	37	3
Upper Neches, A.D. 1560-1680	4	7
<i>Historic Caddo period</i>		
Goode Hunt/Clements (41CS23/ 41CS25)	12	3

vessel forms in the East Texas ceramic assemblages under consideration herein. The only higher percentage of white clay pigment use is in the Mockingbird site vessel assemblage (see Table 56). There, 95 percent of the engraved vessels with pigments have a white clay pigment, including all of the carinated bowls (n=12), compound bowls (n=5), one bottle, and one bowl; another bowl had a red clay pigment (Perttula et al. 1998). Forty-three percent of the engraved vessels in the assemblage have a pigment applied to the decorative elements.

Other Late Caddo period Titus phase vessel assemblages in the Little and Big Cypress Creek basins in East Texas are dominated by vessels with white clay pigment, especially on carinated bowls and compound bowls as well as jars; bottles mainly have red clay pigments (Perttula et al. 2012a, 2012b, 2012c). Bowls in these assemblages, which rarely have pigments, have both red and white pigments; ollas tended not to have an applied pigment of either color (Perttula et al. 2012a:35).

In the upper Neches River basin, by contrast, a temporal series of Late Caddo Frankston phase fine ware vessels are dominated by vessels with a red clay pigment, at least from ca. A.D. 1400-1560 (see Table 56). In those assemblages, 92.5 percent of the fine ware vessels with pigment have a red clay pigment, and this includes bottles, bowls, and effigy bowls. After ca. A.D. 1560, only 36 percent of the vessels with pigment have a red clay pigment, and instead use of a white clay pigment predominates; most of these vessels are carinated bowls (Perttula 2011:279-280).

In the Historic Caddo vessel assemblages from the nearby Goode Hunt and Clements site, both ca. A.D. 1680-1730 Nasoni Caddo cemeteries (Perttula 2015b), pigment use on engraved fine ware vessels ranges from 25-29 percent of the sample of engraved vessels. Eighty percent of these vessels have a red clay pigment, and this includes bottles (n=4, 100 percent), bowls and compound bowls (n=2, 100 percent), and carinated bowls (n=9, 67 percent). Only a few carinated bowls in the vessel assemblages at both sites have a white clay pigment.

Ancestral Caddo potters in sites and communities in what is now East Texas used clay pigments, either red or white in color, to embellish fine ware engraved ceramic vessels. This was a practice that was established and used for at least nine centuries. The relatively common occurrence of pigments on fine ware vessels suggests that both red and white clay pigments were readily accessible to Caddo potters in communities across East Texas, and it is likely that there was an active trade/exchange of pigments across the region that were secured from sources of hematite and kaolin clay.

The examination of the fine ware ceramic sherds from the platform mound at the Hatchel site (41BW3), and fine ware engraved ceramic vessels from select Middle Caddo to Historic Caddo period assemblages in the region (from ca. A.D. 1000-1730), indicate that there were spatial and temporal differences in the frequency of use of clay pigments by Caddo potters as well as in the pigments of choice to use on different vessel forms. The assemblages examined to date indicate that there was not one shared pattern or tradition in pigment use within sites occupied at different times or within different localities, although the use of red clay pigment appears to have been more common between ca. A.D. 1000-1400. Rather there was a diversity in pigment selection and use that is probably related to the meaning(s) of the two colors in different Caddo communities, and what the meanings were in different times and places.

Lankford (1992) discussed the importance of the use of either red or white colors in social, political, and cosmological contexts in Southeastern North American societies, and such contexts likely also apply to ancestral Caddo groups that lived in East Texas. As Hart and Perttula (2010:208) note, colors likely “symbolize the cosmological underpinnings of worldviews.”

According to Bobby Gonzalez (April 2008 personal communication) “the red pigment means life and is very sacred among the Caddo. The red pigment is now used on peyote staffs, and during ritual ceremonies and prayer meetings, the red pigment is painted on and in the ears as well as on the top of the head in the middle of a man’s hair line, running from front to back; the women and men paint themselves in the morning when the sun comes up.” Caddo peoples bathed the deceased in red clay (Gonzalez 2005:57), and in historic times red was used as a paint or pigments on material items in ceremonies (Hart and Perttula 2010:208). Therefore, vessels with a red pigment likely are from vessels that symbolize life and its sacredness to the Caddo. It is possible that the red pigment seen on vessels placed in Caddo burials may have been added to the vessels shortly before they were placed in graves with the deceased.

“The white clay is also very sacred to the Caddo and was used for altars during Caddo peyote meetings” (Bobby Gonzalez, 2008 personal communication), and for doctoring cuts, burns, and stomach problems. In historic times, Caddo men painted their faces red and white, and white feathers were a sign of peace (Hart and Perttula 2010:208).

In conclusion, the alternating preference for red or white clay pigments by Caddo potters in different communities at different times may relate to social, political, or religious dualisms in

Caddo lifeways. Thus, Lankford's (1992:76-77) suggestion that the two colors denote the Lower world of change (red) and the Upper world of order (white) has considerable significance in the interpretation of pigment use on ceramic vessels by Caddo peoples. Before ca. A.D. 1400, between ca. A.D. 1400-1560 in the upper Neches, and between ca. A.D. 1680-1730 among the Nasoni Caddo, red clay pigments appear to have been preferred by Caddo potters to embellish the decorations on fine ware vessels. Cosmological and world views of the Caddo began to change in certain communities in East Texas after ca. A.D. 1400, such that new cosmological and world views came to dominate beliefs and mortuary ritual use; one marker of this is different trends in pigment use. Fine ware engraved vessels in a number of mortuary vessel assemblages dating after ca. A.D. 1450 usually then had white pigments rubbed in the design. Finally, George Sabo has noted that color use by Caddo peoples "suggest an association of red and white with an ongoing cycle of life in which birth and death are subsumed" (May 2009 personal communication).

Comparisons between Ceramic Sherd Assemblages, Vessels, and Vessel Sections from Zones A-H, I-J, and K

In this section, I employ (1) the proportions of different utility ware and fine ware sherds from the different zones in the mound, as well as (2) the presence or absence by zone of arrow point types and vessels/vessel sections from identified types, to partition the most similar ceramic assemblages so that they can be grouped into discrete and chronological intervals (see Peebles and Roberts 2013:3003) within the Hatchel site platform mound. These two sets of ceramic data indicate that the ceramic vessels and ceramic vessel sherds in the platform mound can be divided into four different chronological groups: I, zones A-D; II, zones E-F; III, zones G-J; and IV, zone K. As has been discussed in other places within this monograph, Group I zones are estimated to date from A.D. 1600-1691; Group II zones to date from ca. A.D. 1550-1600; Group III zones date from ca. A.D. 1500-1550, with the rapid construction of the primary platform mound (Zones I-J) at or about ca. A.D. 1500; and the Group IV zone K ceramics date between ca. A.D. 1000-1200.

Table 57 presents details on the number and proportion of decorated sherds by method in the utility ware and fine ware sherds, as well as the zones where such sherds are either most common or are only present in specific zones. The differential distribution of the decorated sherds has permitted the ceramic assemblages to be divided into distinct and chronologically discrete groups of stylistically different utility and fine wares.

In Group I (Zones A-D), sherds from brushed-incised-punctated, brushed-punctated, tool punctated, Foster Trailed-Incised (several varieties), Hudson Engraved, red-slipped, and Keno Trailed vessels are most abundant. Sherds with applied-tool punctated (Zone A), incised (Zone D), engraved-trailed (Zone B), and traile-punctated (another variety of Keno Trailed, Zone B) vessels are present in only a few specific Group I zones (see Table 57).

The most common decorative methods in the Group II (Zones E-F) set of assemblages are sherds with brushed, brushed-incised, roughened (McKinney Plain), traile-appliqued (Foster Trailed-Incised), traile-brushed (Foster Trailed-Incised), engraved-punctated, and engraved-red-slipped decorative elements. Appliqued-punctated sherds are present in Zones E and F, while neck banded-incised (Nash Neck Banded, Zone F) and roughened-incised (McKinney Plain, Zone F) sherds are only present in specific zones.

Table 57. Sherd decorative methods and principal zones of occurrence in the Hatchel platform mound.

Decorative method	N	% of Ware	Zones most common	Only present in specific zones
<i>Utility ware</i>				
Appliqued	312	13.8	H-I	-
Appliqued-incised	38	1.7	Below H	-
Appliqued-fingernail punctated	2	0.1	-	E and H
Appliqued-tool	5	0.2	-	A, F-G, Below H
Appliqued-punctated-incised	3	0.1	-	G-Below H
Brushed	429	19.0	F, I	-
Brushed-appliqued	97	4.3	-	G
Brushed-appliqued-incised	4	0.2	-	H
Brushed-appliqued-punctated	3	0.1	-	G-H
Brushed-incised	155	6.8	E-F	-
Brushed-incised-punctated	2	0.1	-	B
Brushed-punctated	14	0.6	B	
Incised	454	20.1	D, I-J, K	-
Incised-punctated	111	4.9	J	-
Neck Banded	122	5.5	I	-
Neck Banded-appliqued	2	0.1	-	H
Neck Banded-appliqued-incised	1	Trace	-	Below H
Neck Banded-brushed-appliqued	1	Trace	-	G
Neck Banded-incised	2	0.1	-	F, H
Punctated, cane	4	0.2	-	H, Above I
Punctated, circular	2	0.1	-	Below H-Above I
Punctated, fingernail	34	1.5	I, J	-
Punctated, finger-nail-tool	1	Trace	-	I
Punctated, tool	68	3.0	A	-

Table 57. Sherd decorative methods and principal zones of occurrence in the Hatchel platform mound, cont.

Decorative method most common	N in specific zones	% of Ware	Zones	Only present
Ridged	21	0.9	H	-
Ridged-brushed	49	2.2	H, I	-
Ridged-incised	28	1.3	-	G-H
Roughened	94	4.2	E	-
Roughened- appliqued	6	0.3	H, Below H	-
Roughened-brushed	1	Trace	-	H
Roughened-incised	2	0.1	-	F
Stamped	1	Trace	-	E
Trailed*	167	7.4	A-D	-
Trailed-appliqued*	6	0.3	E	-
Trailed-brushed*	1	Trace	-	E
Trailed-incised*	18	0.8	D	-
Trailed-punctated*	1	Trace	-	G
<i>Fine Ware</i>				
Engraved	1531	66.3	H, Below H	-
Engraved-appliqued	13	0.6	-	G, H, Below H
Engraved-brushed	1	Trace	-	Below H
Engraved-incised	4	0.2	-	A-B
Engraved-punctated	279	12.1	E, G, I	-
Engraved-punctated- appliqued	4	0.2	-	G-H
Engraved-red-slipped	111	4.8	E-F	-
Engraved-trailed	2	0.1	-	B, Below H
Painted	1	Trace	-	H
Red-slipped	306	13.3	B-C	-
Red-slipped-appliqued	1	Trace	-	H
Trailed**	53	2.3	C-D	-
Trailed-punctated**	2	0.1	-	B, H

*Foster Trailed-Incised

**Keno Trailed

In Group III (Zones G-Above K), sherds with applied and applied-incised decorative elements are common, as are brushed (Zone I), incised (Zones I-K), neck banded (Nash Neck Banded, Zone I), fingernail punctated (Zones I-J), ridged (Belcher Ridged, *var. Belcher*, Zone H), and ridged-brushed (Belcher Ridged, *var. Bryam's Ferry*, Zones H-I), roughened-applied (McKinney Applied, Zones H and Below H), engraved (Zones H and below H), and engraved-punctated (Zones G and I) (see Table 57). Sheds with other decorative elements are specific to Zone G (brushed-applied; neck banded-brushed-applied; trailed-punctated), Zone G and H (brushed-applied-punctated; Belcher Ridged; engraved-punctated-applied), Zone G-H-Below H (engraved-applied, Hatchel Engraved), Zone H (brushed-applied-incised; neck banded-applied; roughened-brushed; painted; red-slipped-applied), Below Zone H (neck banded-applied-incised; engraved-brushed), and Zone I (fingernail-tool punctated).

The most characteristic decorated ceramic sherds in Group IV (Zone K, below the mound) have incised decorative elements from Crockett Curvilinear Incised vessels (see Table 57). This Early Caddo assemblage is separated in time by ca. 300 years from the beginning of construction and use of the primary platform mound in Zones I and J, but nevertheless the primary platform mound was constructed directly atop important ritually used structures in Zone K (see Figure 111). The location of this place that was apparently important over the long term to the Caddo community at the Hatchel site must have been continuously marked by poles or other means until the placement of the platform mound directly over the Zone K structures some 300 years after they had been abandoned.

Only a few of these sherd decorative method categories are from shell-tempered vessels, and the highest proportion of shell-tempered sherds are in the applied-punctated (30.0-40.0 percent), engraved-red-slipped (36.0 percent), red-slipped (22.9 percent), tool punctated (19.3 percent), neck banded (16.4 percent), and fingernail punctated (14.7 percent). These decorative methods are most common or occur only in zones E-Below H (applied-punctated, ca. A.D. 1500-1600), zones E and F (engraved-red-slipped, ca. A.D. 1550-1600), zones B-C (red-slipped, ca. A.D. 1620-1670), zone A (tool punctated, ca. A.D. 1670-1691), zone I (neck banded, ca. A.D. 1500), and zones I-J (fingernail punctated, ca. A.D. 1500).

By comparison, only 0.8 percent of the sherds from engraved vessels are shell-tempered, and only 5.4 percent of the Foster Trailed-Incised (zones A-D, ca. A.D. 1600-1691) and 5.7 percent of the Keno Trailed vessel sherds (zones C-D, ca. A.D. 1600-1650) are shell-tempered. Most of the shell-tempered sherds are from utility ware and fine ware vessels made by McCurtain phase potters, including Avery Engraved, Clement Redware, McKinney Applied, Nash Neck Banded, and Emory Punctated-Incised. Thus, the shell-tempered sherds and vessels in the ceramic assemblage at the Hatchel site are not considered to have been locally-made, but are instead wares made by Caddo potters in other parts of the Red River basin and traded/exchanged with the Nasoni Caddo community at the Hatchel site over a period of ca. 200 years.

The earliest Caddo component in the platform mound excavations at the Hatchel site is in Zone K, and is best represented by Crockett Curvilinear Incised sherds and a vessel (Table 58). The settlement responsible for the Zone K structures (see Figure 111) and the ceramic assemblage was buried about 300 years later by the construction of primary platform mound (Zones I-J) and the first two of the platform mound zones with structures constructed and used on Zones G and H.

Zones G-J are characterized by Bassett arrow points, a bulbous arrow point form, and a range of fine ware and utility ware vessels and vessel sections. Specific to these zones are vessels of Avery

Table 58. Stratigraphic associations of arrow point forms, vessels, and vessel sections in the Hatchel platform mound excavations.

Artifact category	A	B	C	D	E	F	G	H	bH	aI	I	J	K
Bassett arrow point							X	X	X	X			
bulbous form point								X					
Maud arrow point	X	X	X	X	X	X		X					
Cowhide Stamped	X												
Hodges Engraved, Burial 4	X												
Hodges Engraved		X											
Simms Engraved		X			X	X		X		X			
Avery Engraved Feature 12				X									
Belcher Engraved			X					X					
Foster Trailed-Incised Burial 1					X								
Hatchel Engraved					X								
Keno Trailed, Burial 1					X								
Simms Engraved, F. 14					X								
Barkman Engraved, Burial 2						X							
Foster Trailed-Incised Burial 2						X							
Foster Trailed-Incised						X	X	X					
Avery Engraved						X		X					
Avery Engraved, var. Bradshaw, Burial 3						X		X					
McKinney Plain						X	X	X					
Barkman Engraved						X		X	X	X			
Bowie Engraved						X		X					
Applied bowl								X					
Moore Noded								X					
Crockett Curvilinear Incised										X			X

X=present; bH=below Zone H; aI=above Zone I

Engraved, *var. Bradshaw*, Bowie Engraved, an appliqued bowl, and a Moore Noded bowl (see Table 58). Other ceramic types that first appear in zones G-J, but are also made and used in later zones, include Simms Engraved, Belcher Engraved, Foster Trailed-Incised, McKinney Plain, and Barkman Engraved.

In Zones E-F, triangular Maud arrow points began to be manufactured and used by the Nasoni Caddo at the Hatchel site, and continued in use (in Zones A-D) until the mound was no longer used after ca. A.D. 1691. The ceramic vessels and vessel sections specific to Zones E-F are Hatchel Engraved, Keno Trailed, and Foster Trailed-Incised, while Simms Engraved, Avery Engraved, and Barkman Engraved are shared primarily with the Zone G-J ceramic assemblages (see Table 58).

Zones A-D are the latest in the Hatchel mound, and have their own distinctive sets of arrow point (Maud) and ceramic types in the vessels and vessel sections. The ceramic types in these zones include Cowhide Stamped and Hodges Engraved in Zones A and B, Avery Engraved from Zone D, and Belcher Engraved and Simms Engraved in Zones B and C, respectively, as well as in either zones E-F or Zones G-Above Zone I (see Table 58).

None of the recovered ceramics in Zone A, the latest mound zone, are specifically from identified Historic Caddo Red River ceramic types such as Natchitoches Engraved, several varieties of Foster Trailed-Incised, Keno Trailed, and Hodges Engraved, or Cabaness Engraved that date from ca. A.D. 1690-1730 (see Schambach and Miller 1984:168 and Table 11-12). This would appear to be indicative of the fact that although the platform mound at the Hatchel site was apparently occupied in 1691 during the time of the Teran expedition to the site, it was abandoned very shortly thereafter, as was much of the community. Another possibility is that the structure shown on the platform mound, apparently “partly buried within the mound” (Sabo 2012:435), may actually have already been abandoned sometime prior to 1691, and was in the process of collapse, thus its appearance as being partly buried in the mound.

The proportion of fine wares to utility wares (50.5 percent to 49.5 percent) in the platform mound ceramic assemblage at the Hatchel site is notable given the likely age of the assemblage (post-dating ca. A.D. 1500), and the supposition that the Nasoni Caddo were successful maize and bean farmers, as were virtually all Red River Caddo peoples by this time (cf. Perttula et al. 2014). Other Late Caddo period ceramic assemblages on the Red River both upstream and downstream from the Hatchel site are much different, with the proportion of fine wares ranging from only 9-26 percent (Kelley 1997:Table 7; McKinnon 2013; Perttula 2008b:Table 7; Webb 1959:Table 1). Only at the nearby Roseborough Lake site is there a comparable proportion of fine wares (50 percent) in village areas there (Gilmore 1986), and fine wares are also much more abundant than utility wares at the Cedar Grove site (Schambach and Miller 1984:109). It may be that the assemblage in the platform mound at Hatchel (as well as certain village areas), as well as at the Roseborough Lake and Cedar Grove sites, is distinct in its high proportion of fine wares because of the status of the families living there—and perhaps their focus of food serving and feasting—and/or that plain wares may also have been used in the cooking and storage of maize and other food stuffs, skewing the correlation between cooking and utility ware jars in this Caddo community.

Broader Regional Comparisons

The broader regional comparison of Caddo ceramic assemblages along this part of the Red River, and then east to Belcher phase assemblages in the Great Bend area and below in Northwest

Louisiana, begins with investigated areas at the Hatchel site, and a number of nearby sites that were likely part of the same Nasoni Caddo community (Figure 116). The areas mentioned are village and burial plots at the Hatchel site itself (see Figure 1).

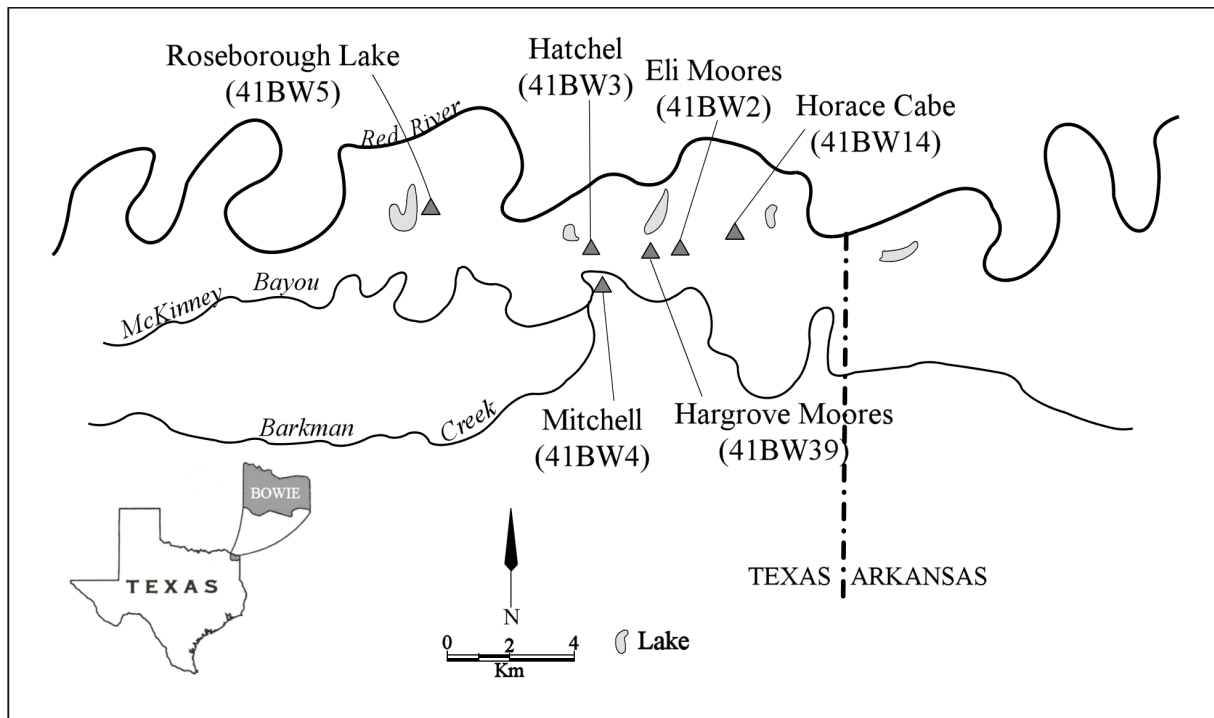


Figure 116. Location of the Hatchel (41BW3), Eli Moores (41BW2), Mitchell (41BW4), Horace Cabe (41BW4), and Roseborough Lake (41BW5) sites. Sites 41BW169, 41BW713, and 41BW716 are located between the Hatchel and Eli Moores sites.

The earliest ceramic vessel sherd in the Hatchel site ceramic assemblage is a Marksville Incised, *var. Spanish Fort* grog-tempered body sherd from Village Plot 1 (Square 7-8). Brown (1998:59) dates this variety of Marksville Incised to ca. A.D. 100-300 in the lower Mississippi River valley, the lower Yazoo basin, and the Natchez Bluffs region.

Ceramic sherds from various contexts at the Hatchel site, not just Zone K below the platform mound, and vicinity also date to the Formative Caddo period. One such sherd is a rim sherd from 41BW713 that may be from a Coles Creek Incised, *var. Keo* vessel (Perttula 2008a). This particular variety of Coles Creek Incised has incised lip lines as the only decoration on a grog-tempered paste (Rolingson 1998:40-41 and Figure 44). The lip line is usually well-defined, as is it on the 41BW713 sherd. Incised lip lines are certainly indicative of Coles Creek Incised pottery found in the lower Mississippi Valley (LMV) (see Brown 1998; Phillips 1970).

This variety of Coles Creek Incised was defined at the Toltec mound site on the Arkansas River in central Arkansas, but has been reported from the Crenshaw site on the Red River (Frank Schambach, 2006 personal communication). At the Toltec and Crenshaw sites, *var. Keo* is found in archaeological contexts that predate ca. A.D. 1000. More specifically at Toltec, in Mound D, the *var. Keo* sherds occur in deposits that are bracketed by dates that range between A.D. 830 and A.D. 1040 (Rolingson 1998: Table 1).

One area (Area II) in the Hatchel village has distinctive earlier incised, punctated, and incised-punctated ceramic decorative styles (Perttula and Nelson 2003:Figure 26e-f, h-i, k); these ceramics are also associated with 11-13th century radiocarbon dates from the archaeological deposits. The most distinctive decorated sherds from these early Caddo contexts at Hatchel have large impressed or circular punctations (see Perttula and Nelson 2003:Figure 26j-k), and are probably from Crockett Curvilinear Incised vessels (see Suhm and Jelks 1962:Plates 16e and 17h-i). There is also another sherd from this area (see Perttula and Nelson 2003:Figure 26f) that may be from a Crockett Curvilinear Incised bowl or carinated bowl. The incising decorative element on this sherd appears to be an incised triangular element that is part of a scroll design. A carinated bowl with the same scroll design—but also accompanied by incised circles filled with circular punctations between the scrolls—was recovered from Floor K underneath the Hatchel mound (see Laughlin 1940:42; cf. Suhm and Jelks 1962:Plate 17b, m), and a Hickory Engraved bottle and a Crockett Curvilinear Incised bowl were among the funerary offerings in Burial 14 in Burial Plot 1 at Hatchel. Similarly, the zoned incised-small circular punctated sherds from Area II (see Perttula and Nelson 2003:Figure 26h-i) also resemble Crockett Curvilinear Incised or Pennington Punctated Incised decorative motifs (cf. Suhm and Jelks 1962:Plates 17j-k, t and 61d-e).

Ceramic vessels placed in Middle Caddo period burials (Set 1) at the Mitchell site include the fine wares Haley Engraved, Hickory Engraved, Hempstead Engraved, and Friendship Engraved, along with untyped engraved fine wares with rectangular, curvilinear, and horizontal elements on carinated bowls as well as vertical engraved elements and horizontal-curvilinear-and triangular elements on bottles. Utility wares include Dunkin Incised jars as well as incised-punctated vessels, East Incised bowls, a Haley Complicated-Incised jar, a few Pease Brushed-Incised jars, incised, incised-punctated-appliqued, and punctated-appliqued vessels. A few jars have handles. There are also plain ware carinated bowls, bottles, and jars included as funerary offerings in these ca. A.D. 1200-1400 burial features (Table 59). More than 56 percent of the vessels in the Set 1 assemblage are fine wares; another 34 percent are utility ware vessels, and 9.4 percent are plain ware vessels.

The Middle Caddo period component at the Paul Mitchell site is affiliated with the Haley phase, dating to ca. A.D. 1200-1400 based on radiocarbon dates (see Samuelsen 2014) and the seriation of typologically and chronologically distinctive ceramic decorative styles. Because of a number of excavations over the last 100 years or so, this is a fairly well understood ancestral Caddo archaeological phase marked by mound centers (such as the Battle, Crenshaw, and Haley sites)—both platform and burial mounds—large off-mound cemeteries, and large dispersed communities comprised of villages, hamlets, and farmsteads along the Red River both upstream from and in the Great Bend area of the Red River in Southwest Arkansas and the northeastern-most part of East Texas (Perttula 2016c:Figure 117). The nearby Hatchel and Cabe (41BW14) sites have Haley phase village deposits and/or burials, but the mounds at both sites were constructed after ca. A.D. 1450-1500 in the later Texarkana phase. The Haley phase vessels from the Horace Cabe site include grog-tempered Haley Engraved and East Incised vessels (Perttula et al. 1995).

The Middle Caddo period ceramics from the large platform mound at the Battle site (3LA1) include sherds from Haley Complicated-Incised, Handy Engraved, Hempstead Engraved, and Pease Brushed-Incised vessels (McKinnon 2013, 2017). These may be associated with a radiocarbon date of A.D. 1310-1430 from Structure 3 in the mound. At the Belcher site, the Belcher I Middle Caddo period component has 565 sherds and five vessels from defined Haley Engraved, Haley Complicated Incised, Hickory Engraved, Maddox Engraved, Dunkin Incised, Crockett Curvilinear Incised, Pease Brushed-Incised, Wilkinson Punctated, and Sinner Linear Punctated types (see Webb 1959).

Table 59. Middle Caddo period ceramic vessels (Set 1) from the Paul Mitchell site: plain vessels, and vessels defined to types and unidentified to type.

Type or unidentified to type	No.	Percentage
Dunkin Incised	1	3.1
East Incised	1	3.1
Haley Complicated Incised	1	3.1
Haley Engraved	4	12.5
Hickory Engraved	4	12.5
Pease Brushed-Incised	2	6.3
Unidentified appliqued-punctated	1	3.1
Unidentified engraved	10	31.3
Unidentified incised	2	6.3
Unidentified incised-punctated	1	3.1
Unidentified incised-punctated-appliqued	1	3.1
Unidentified fingernail-punctated	1	3.1
Plain bottle	1	3.1
Plain carinated bowl	1	3.1
Plain jar	1	3.1
Totals	32	100.0

Village Plot 1 decorated sherds from the Hatchel site point to a primarily post-A.D. 1550-1600 occupation by Caddo peoples, as do ceramic sherds from Village Plot 2 and Burial Plots 1-4. Fine wares include a few sherds of Barkman Engraved (indicative of a pre-A.D. 1550 Caddo use of the area), as well as Belcher Engraved, Hodges Engraved, and Simms Engraved sherds. Utility ware sherds are from McKinney Plain, Cass Appliqued, Karnack Brushed-Incised, Emory Punctated-Incised, and Foster Trailed-Incised jars (Perttula 2014a).

Vessels from village areas, burial plots, and in platform mound contexts at the Hatchel site are primarily from utility wares (37 percent) and fine wares (52 percent), and include jars, carinated bowls, bowls, bottles, and compound bowls, with McKinney Plain and Foster Trailed-Incised vessels being the most common utility wares, and Barkman Engraved, Simms Engraved, and Avery Engraved being the most common fine wares (Perttula 2015a:Table 3). Hodges Engraved and Keno Trailed vessels, both post-A.D. 1600 in age, are present only in Burial Plot 1 and in Zone E and Burial 4 in the side of the platform mound.

Other excavations in the Hatchel village primarily recovered post-A.D. 1400 Texarkana phase ceramics (Areas I, III, IV, and V, see Perttula and Nelson 2003). These assemblages have decorated sherds from Simms Engraved, Keno Trailed, Foster-Trailed Incised, McKinney Plain or Belcher Ridged, and Barkman Engraved vessels (Perttula and Nelson 2003:Figure 25a-h and Figure 26a-d, g). More than 30 percent of the decorated sherds from the Hatchel village areas have trailed

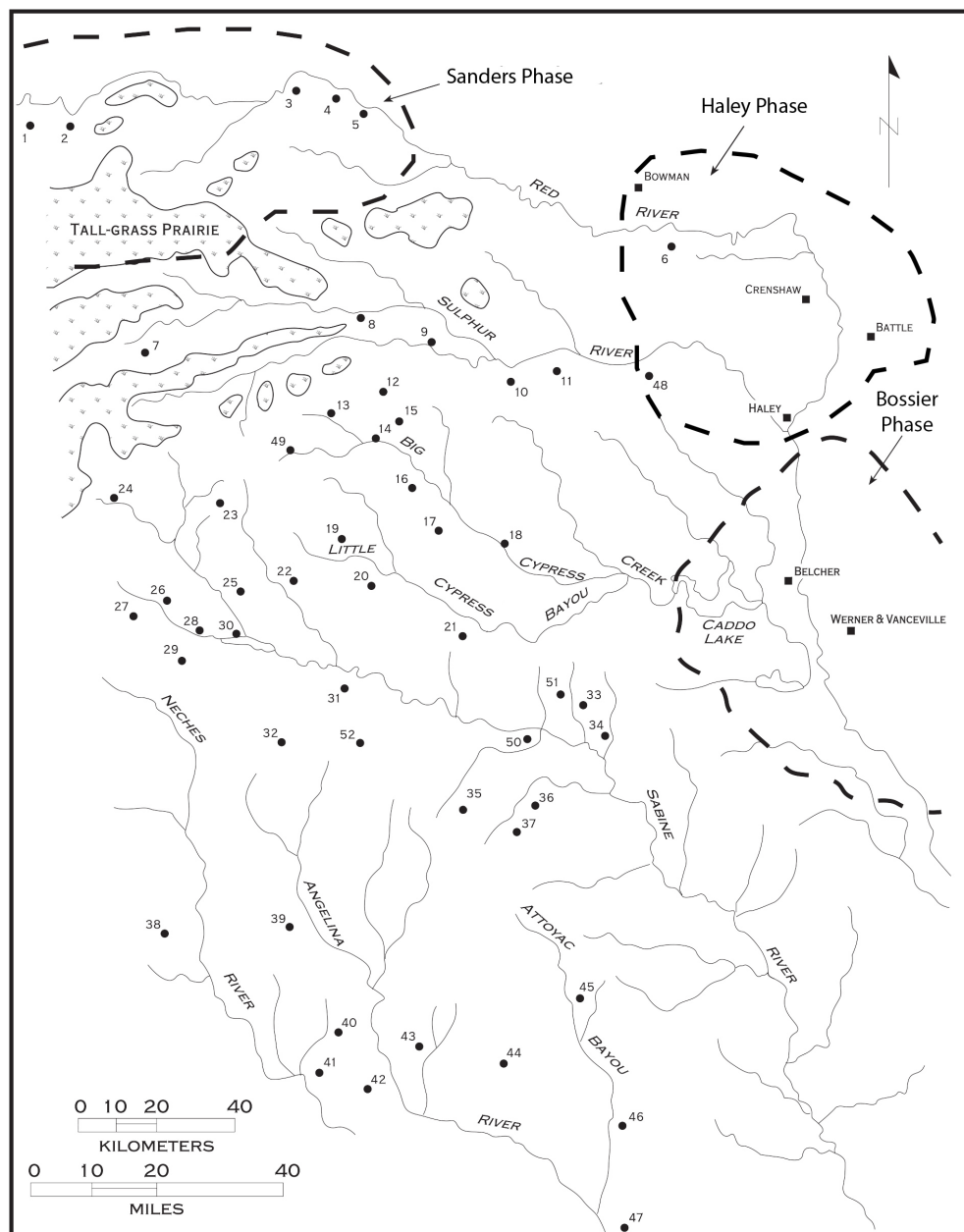


Figure 117. Important Middle Caddo sites, major Red River Caddo centers occupied during the Middle Caddo period, and defined Middle Caddo period phases. 1, Harling (41FN1); 2, Sanders (41LR2); 3, Fasken (41RR14); 4, Roitsch (41RR16); 5, Holdeman (41RR11); 6, Hatchel (41BW3) and Mitchell (41BW4); 7, Hurricane Hill (41HP106); 8, 41RR181 and Little Mustang Creek; 9, 41TT670; 10, 41CS150; 11, Coker (41CS1); 12, 41TT372; 13, 41FK70; 14, Benson's Crossing; 15, Crabb (41TT650); 16, Harold Williams; 17, 41UR21; 18, Big Oaks; 19, Griffin Mound; 20, 41UR133; 21, 41UR8; 22, McKenzie; 23, Spoonbill; 24, 41RA65; 25, T. M. Moody; 26, 41WD518; 27, Yarbrough; 28, Charlie Crews; 29, Jamestown; 30, Carlisle; 31, Langford; 32, Bryan Hardy; 33, 41HS74; 34, Old Brown Place; 35, Oak Hill Village; 36, 41PN14; 37, Musgano (41RK19); 38, Pace McDonald; 39, 41CE42; 40, 41CE289; 41, George C. Davis; 42, 41CE290; 43, 41NA20; 44, Washington Square (41NA49); 45, Tyson (41SY92); 46, 41SA123; 47, 41SA89; 48, Knight's Bluff; 49, 41FK7; 50, Hudnall-Pirtle; 51, Gray's Pasture; 52. Redwine. Figure prepared by Robert Z. Selden Jr.

elements from Keno Trailed and Foster Trailed-Incised vessels, and such vessels are particularly common in Area I, Area III, and Area IV (see Perttula and Nelson 2003:Table 6). By contrast, trailed sherds are rare in Area II and Area V, suggesting that earlier Texarkana phase village deposits are present in these parts of the Hatchel village. Engraved sherds from fine ware vessels are common in all village areas, most notably in Area I and Area V. Red-slipped sherds from carinated bowls (some shell-tempered) are restricted to Area I, Area III, and Area IV, while applied sherds from probable McKinney Applied vessels are present in Area II and Area V. Brushed, brushed-incised, and brushed-applied sherds from Karnack Brushed-Incised and Pease Brushed-Incised vessels occur in low frequencies in Area I, II, III, and V, and each area is apparently part of to some extent the Late Caddo Texarkana phase village occupation.

Barkman Engraved vessels in 10 different burials are found in the same areas at the Mitchell site as pre-A.D. 1400 burial vessels as well as later Texarkana phase burials. This suggests that Barkman Engraved is a stylistically transitional fine ware whose origins lie with pre-A.D. 1400 fine wares (i.e., Handy Engraved) in the Great Bend area of the Red River and a fine ware that was replaced by Simms Engraved around ca. A.D. 1550. The similarities in design element structure and design elements between many vessels of Barkman Engraved and Simms Engraved (i.e., narrow horizontal bands with a row or rows of excised punctated), and the generally younger age of Simms Engraved vessels from other Red River contexts suggests that Simms Engraved is a stylistically linked evolution from later versions of Barkman Engraved fine wares in this part of the Red River basin.

Early Texarkana phase (ca. A.D. 1400-1550) ceramic vessels (Set 2) at the Mitchell site certainly include vessels of the types Barkman Engraved, as well as Bowie Engraved, and Hatchel Engraved vessels and Avery Engraved compound bowls with flaring rims. A Glassell Engraved vessel is in one of the burials excavated by the WPA that also has Bowie Engraved vessels. The utility wares include the McKinney Applied, Moore Noded, Nash Neck Banded, and Pease Brushed-Incised types (Creel 1991; Perttula 1992:125), as well as brushed-punctated jars and a punctated-applied jar with handles (Table 60).

The Set 2 Texarkana phase vessels at the Mitchell site include fine wares (57.8 percent), a few plain ware vessels (4.4 percent), and utility ware vessels are common (37.8 percent) (see Table 60). The proportional range of the three wares in the Set 2 assemblage is statistically similar to the Set 1 vessel assemblage (see Table 59), with the most notable difference between the two vessel sets in the relative frequency of plain wares: 9.4 percent in Set 1 and 4.4 percent in Set 2. The Set 3 vessels have no plain wares. Shell-tempered vessels (1.1 percent) are present only in Set 2 at the Mitchell site (Perttula 2016c:Table 7).

The very latest Texarkana phase set of vessels (i.e., postdating ca. A.D. 1600) in sites in the Upper Nasoni Caddo village, including the Paul Mitchell site (Set 3), along the Red River include vessels of the following defined ceramic types: Simms Engraved, Hodges Engraved, Belcher Engraved, Keno Trailed, Taylor Engraved, Foster Trailed-Incised, Nash Neck Banded, and McKinney Applied vessels. Such vessels have been found in burial features in the upper mound stages at the Hatchel temple mound, as well as in sherd assemblages primarily in Zone D and above, the late burial interments in Village Plot 2 at the Hatchel site, and several of the burials at the Eli Moores site. There are also a few such very late Texarkana phase burials in the cemetery at the Paul Mitchell site. The Set 3 vessels are predominantly fine wares (76.5 percent), and utility wares comprise only 23.5 percent of the assemblage from the very latest Texarkana phase burials at the Paul Mitchell site (Table 61). The relative frequency of fine ware vessels in the Set 3 assemblage is

Table 60. Late Caddo period, early Texarkana phase, ceramic vessels (Set 2) from the Paul Mitchell site (41BW4): plain vessels, and vessels defined to types and unidentified to type.

Type or unidentified to type	No.	Percentage
Avery Engraved	1	1.1
Barkman Engraved	15	16.8
Bowie Engraved	10	11.2
Friendship Engraved	2	2.2
Hatchel Engraved	12	13.4
McKinney Appliqued	1	1.1
Moore Noded	6	6.7
Nash Neck Banded	18	20.2
Pease Brushed-Incised	1	1.1
Unidentified appliqued-incised-brushed	1	1.1
Unidentified brushed-punctated	1	1.1
Unidentified engraved	7	7.9
Unidentified engraved-appliqued	3	3.4
Unidentified engraved-punctated	1	1.1
Unidentified incised-appliqued	3	3.4
Unidentified punctated	2	2.2
Unidentified red-slipped	1	1.1
Plain bottle	2	2.2
Plain bowl	1	1.1
Plain jar	1	1.1
Totals	89	100.0

about 30-40 percent higher than is the case in the Set 1 (56.2 percent) and Set 2 (57.8 percent) vessel assemblages.

There are a range of forms represented in the ceramic vessels from Sets 1-3 at the Paul Mitchell site (Table 62). The most common forms in all three sets are jars, carinated bowls, and bottles, but with significant differences in their frequencies between the three sets: the highest proportion of jars and bottles are in Set 1, and the highest proportion of carinated bowls in Set 3. Bowls are notable only in the Set 2 and 3 vessel assemblages. Neckless bottles and compound bowls occur only in the Set 2 assemblage, and deep bowls are present in burial features only in Sets 1 and 2.

Burial features at the Horace Cabe site date to the latest part of the Texarkana phase, based on the ceramic types in the burials: Avery Engraved, Nash Neck Banded, Simms Engraved, Emory Punctated-Incised, and Bailey Engraved. The vessels (n=7) are made with shell temper (Perttula et al. 1995). In habitation areas, 10 percent of the ceramic vessel sherds (n=70) have shell or shell-grog

Table 61. Late Caddo period, late Texarkana phase, ceramic vessels (Set 3) from the Paul Mitchell site: vessels defined to types and unidentified to type.

Type or unidentified to type	No.	Percentage
Bowie Engraved	2	11.8
Emory Punctated-Incised	1	5.9
Glassell Engraved	1	5.9
Hatchel Engraved	1	5.9
McKinney Appliqued	1	5.9
Nash Neck Banded	2	11.8
Simms Engraved	6	35.3
Taylor Engraved	1	5.9
Unidentified engraved	2	11.8
Totals	17	100.0

Table 62. Vessel forms in Sets 1-3 at the Paul Mitchell site.

Vessel Forms	Set 1		Set 2		Set 3	
	N	%	N	%	N	%
Bottle	10	31.3	22	24.4	3	17.6
Bottle-Neckless	-	-	1	1.1	-	-
Bowl	1	3.1	13	14.4	2	11.8
Bowl, deep	1	3.1	1	1.1	-	-
Carinated bowl	7	21.9	25	27.8	7	41.2
Compound bowl	-	-	1	1.1	-	-
Jar	13	40.6	27	30.0	5	29.4
Totals	32	100.0	90	100.0	17	100.0

temper. Represented in the assemblage are red-slipped sherds, and sherds from Emory Punctated-Incised, Avery Engraved, Keno Trailed or Foster Trailed-Incised, and Nash Neck Banded vessels.

The two occupation areas at the Hill Farm site (41BW169), not far southeast of the platform mound at the Hatchel site, appear to have decorated sherd assemblages also indicative of ca. post-A.D. 1550 occupations during the latter part of the Texarkana phase (Perttula et al. 2008:96-97; Sundermeyer et al. 2008:228, 235-236). The principal fine wares in the Hill Farm assemblage include Keno Trailed (n=17 sherds), Hodges Engraved (n=13), Glassell Engraved (n=12), Simms

Engraved (n=2), and Simms or Avery Engraved (n=5). Identified utility wares include Karnack Brushed-Incised (n=12 sherds), Foster Trailed-Incised (n=3), Nash Neck Banded (n=3), and McKinney Plain (n=3). Less than 2 percent of the sherds from the site are tempered with either shell or bone (Perttula et al. 2008:Table 1).

None of the other Texarkana phase sites along the Red River in Bowie County, Texas, have much shell-tempered pottery, when compared to certain contemporaneous Belcher phase and McCurtain phase sites (see Perttula et al. 2012:Tables 4 and 6). In the platform mound at the Hatchel site, only 4.5 percent of the plain ware, utility ware, and fine ware sherds are from shell-tempered vessels, compared to 6.1 percent of the recovered vessels (Perttula 2015a:Table 4), 2.4 percent in Village Plot 1 (Area III) (Perttula 2014a), and 1.6 percent of the sherds from Area B at 41BW169, and 1.4 percent of the sherds from the Cabe site are shell-tempered (Perttula 2008a; Perttula et al. 1995).

The Eli Moores site was apparently also occupied primarily during the latter part of the Texarkana phase, contemporaneous with the latest Belcher phase (Belcher IV) occupation at the Belcher site (Webb 1959), perhaps as late as the late 17th to early 18th century A.D. Principal utility ware sherds have incised, brushed, appliqued, punctated, and trailed-incised decorative elements from Emory Punctated-Incised, Foster Trailed-Incised, Karnack Brushed-Incised, and McKinney Plain vessels. There are also Nash Neck Banded and Belcher Ridged sherds in the utility wares (Perttula 2014b). The fine ware sherds are principally from Barkman Engraved and Simms Engraved vessels, and they account for 58 percent of all the fine ware rim sherds, as well as red-slipped and Keno Trailed bowls and bottles. Sherds from Simms Engraved (n=170, including many sherds from the later hubcap-style vessel form) and Barkman Engraved (n=80) vessels dominate the fine wares from the Eli Moores sites; the common occurrence of Barkman Engraved vessel sherds suggests that a 16th century Caddo occupation was also present there. Other identified fine ware engraved ceramic types in the assemblage include Avery Engraved, Belcher Engraved, Natchitoches Engraved (a post-1690 ceramic type along the Red River), Hodges Engraved, Hatchel Engraved, Taylor Engraved, and Glassell Engraved. Only the Barkman Engraved, Hatchel Engraved, and Simms Engraved fine wares were likely produced locally by Red River Caddo potters, but the other defined ceramic types were likely produced by contemporaneous Great Bend Belcher phase Caddo potters living downstream along the Red River and major tributaries and upstream among McCurtain phase potters (Figure 118; see Perttula et al. 2012). Only 5.7 percent of the sherds from Eli Moores are from shell-tempered vessels (Perttula 2014c).

At the Roseborough Lake site, estimated to have been occupied by the Nasoni Caddo from A.D. 1719-1778 (Miroir et al. 1973; Gilmore 1986), one of the most notable differences between this assemblage and the assemblages from the Hatchel and Eli Moores site is the considerable increase in the use of shell temper for ceramic vessel manufacture during the early-late 18th century occupation at the Roseborough Lake site, from 4.5-8.3 percent at Eli Moores and Hatchel to 57 percent in the sherds in various collections at the Roseborough Lake (Gilmore 1986; Miroir et al. 1973; Perttula 2017:Table 14). Higher percentages of shell-tempered ceramics have even been documented at the late 17th-A.D. 1730 component at the Cedar Grove site (3LA97) well downstream along the Red River from Roseborough Lake: 86 percent of the plain and utility ware sherds are from shell-tempered vessels and 38 percent of the fine ware sherds where temper was apparent are also from shell-tempered vessels (Schambach and Miller 1984:109).

In the utility wares, sherds from incised vessels (Ebarb Incised and Emory Punctated-Incised) came to dominate the Nasoni Caddo ceramic assemblages after ca. A.D. 1719, as utility wares with

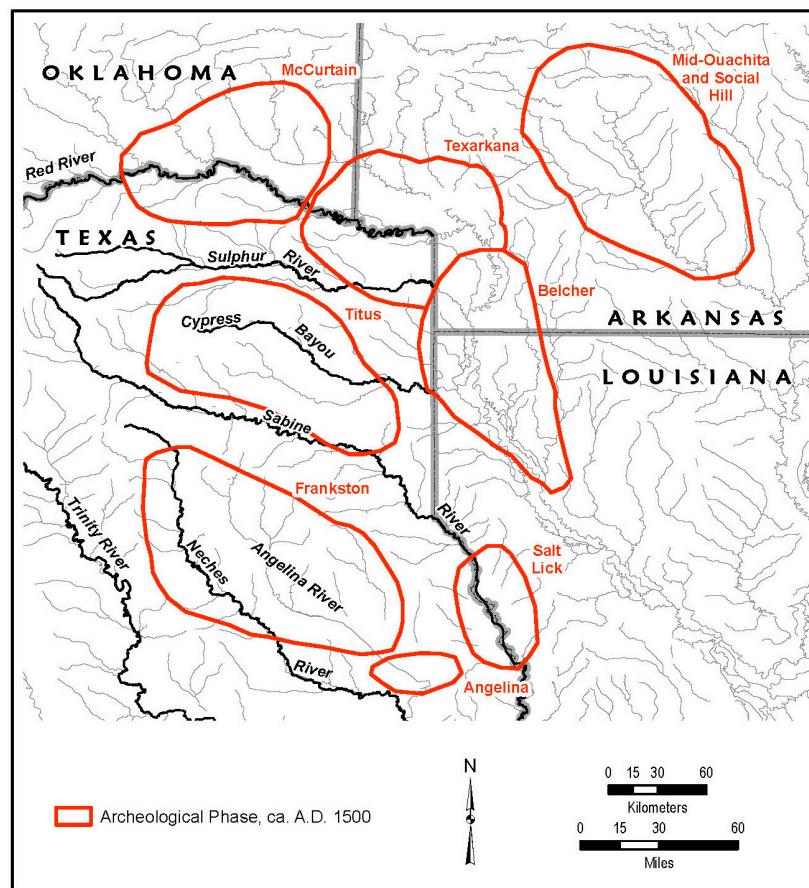


Figure 118. Late Caddo period phases in the southern Caddo area. Of particular interest are the proximally situated Texarkana and Belcher phases.

incised decorative elements at the Roseborough Lake site comprise 41.5 percent of the assemblage as a whole, compared to only 14.3-15.7 percent in the Hatchel and Eli Moores components (see Perttula 2017:Table 14). Other utility wares are more common in pre-A.D. 1719 contexts, including applied sherds from Cass Applied vessels (6.5-7.4 percent in pre-A.D. 1719 contexts and 0.9 percent in post-A.D. 1719 contexts), brushed sherds from Karnack Brushed-Incised vessels (10.6-15.3 percent in pre-A.D. 1719 contexts and 7.3 percent in post-A.D. 1719 contexts), sherds from Nash Neck Banded vessels (1.0-3.2 percent in pre-A.D. 1719 contexts and only 0.5 percent in post-A.D. 1719 contexts), and McKinney Plain and Belcher Ridged vessel sherds are present only in pre-A.D. 1719 contexts (see Perttula 2017:Table 14). Foster Trailed-Incised vessel sherds are present in comparable percentages in each of the Nasoni Caddo components.

Two notable trends in the fine wares is the decreased occurrence of Keno Trailed vessel sherds and red-slipped vessel sherds from pre- to post-A.D. 1719 contexts, from 13.3 percent of the fine ware sherds at Hatchel to 3.0 percent at Eli Moores and 2.8 percent at the Roseborough Lake site. In the case of red-slipped sherds, they are most common at Hatchel (4.6 percent), and only comprise 2.0-2.2 percent, respectively in Historic Caddo assemblages (see Perttula 2017:Table 14). Engraved sherds with a red slip also decrease from 1.4 percent to 0.2 percent through time in the assemblages. Among the engraved fine ware sherds, the highest proportions are in the Eli Moores assemblage, at 48.0 percent, but engraved fine ware sherds range from 28.6-34.0 percent in the Hatchel and

Roseborough Lake sites, respectively, so fine wares remain relatively common in Nasoni Caddo ceramic traditions from pre-A.D. 1690 to post-A.D. 1719 times.

What is different through time in these Nasoni Caddo ceramic assemblages is in the specific fine ware types, other than Keno Trailed, that were being made and used from one component to another. In the Hatchel site fine wares, the best represented fine ware types are Barkman Engraved, Simms Engraved, and Belcher Engraved; at the Eli Moores site, the two most common fine ware types are Simms Engraved and Barkman Engraved; only two of 588 engraved sherds at the Eli Moores site are from Natchitoches Engraved vessels. Conversely, at the Roseborough Lake site, Natchitoches Engraved vessel sherds are most abundant, followed by Simms Engraved. After A.D. 1719, Natchitoches Engraved vessels are well represented, but are virtually absent in pre-A.D. 1719 Nasoni Caddo contexts, while Simms Engraved (both grog-tempered and shell-tempered varieties) was common in both pre-A.D. 1719 and post-A.D. 1719 contexts in Nasoni Caddo ceramic assemblages. Caddo ceramic vessels in the ca. A.D. 1760-1790 component at the Indian Springs #2 site (41BW512), a few miles upstream from Roseborough Lake (see Figure 116), included a Natchitoches Engraved bowl, a Womack Engraved jar, a Simms Engraved carinated bowl, and an Emory Punctated-Incised jar (Perttula 2005b:43-44); none of the vessels were shell-tempered, however.

The ancestral Caddo ceramic artifacts from the Roseborough Lake site represent the material remains of a Nasoni Caddo occupation dating from the early to late 18th century. The character of that occupation is best represented by the Caddo ceramic utility ware, fine ware, and plain ware assemblage, split between shell-tempered and grog-tempered vessels of the types Natchitoches Engraved, Simms Engraved, Keno Trailed, Hudson Engraved, Emory Punctated-Incised, Ebarb Incised, Karnack Brushed-Incised, Cass Appliqued, Foster Trailed-Incised, and Karnack Brushed-Incised.

Almost 40 percent of the vessel sherds from 41BW716 (see Perttula 2008a; Sundemeyer et al. 2008) are shell-tempered, including a sherd from a Simms Engraved vessel. The grog-tempered decorated sherds (n=9) from the site have brushed, incised, and engraved decorative elements. Although the assemblage from the site is small, the proportion of shell-tempered vessel sherds suggests it likely also dates to Historic Caddo period times.

Kelley (2012:417-423) has summarized the character of the ceramics from Belcher phase sites in northwestern Louisiana and southwestern Arkansas (Figure 119). The principal ceramic types present in Belcher phase sites include fine wares, utility wares, and plain wares (Briarfield Plain). The fine wares are best represented by several varieties of Belcher Engraved vessels and sherds, along with different varieties of Hodges Engraved and Glassell Engraved, and smaller amounts of Avery Engraved, while utility wares include Foster Trailed-Incised, Cowhide Stamped, Belcher Ridged, and Karnack Brushed-Incised. Keno Trailed vessels and sherds are also present in Belcher phase sites.

Belcher phase ceramic vessels and sherds are regularly tempered with burned mussel shell (Kelley 2012:420), upwards of 70 percent at the Beene Plantation site (16BO19) and 53 percent at the McLelland site (16BO236, Kelley 1997), but as low as 2.7 percent in the village area deposits at the Battle site (3LA1, McKinnon 2013, 2017), and 2.4 percent of the vessel sherds and 10.3 percent of the vessels recovered at the Belcher site (16CD13, Webb 1959). There are differences in the composition of Belcher phase ceramics from site to site, and from sites of different ages within the ca. A.D. 1500-1700 span of the phase (see Kelley 2012:Table 14-1), and then again to components

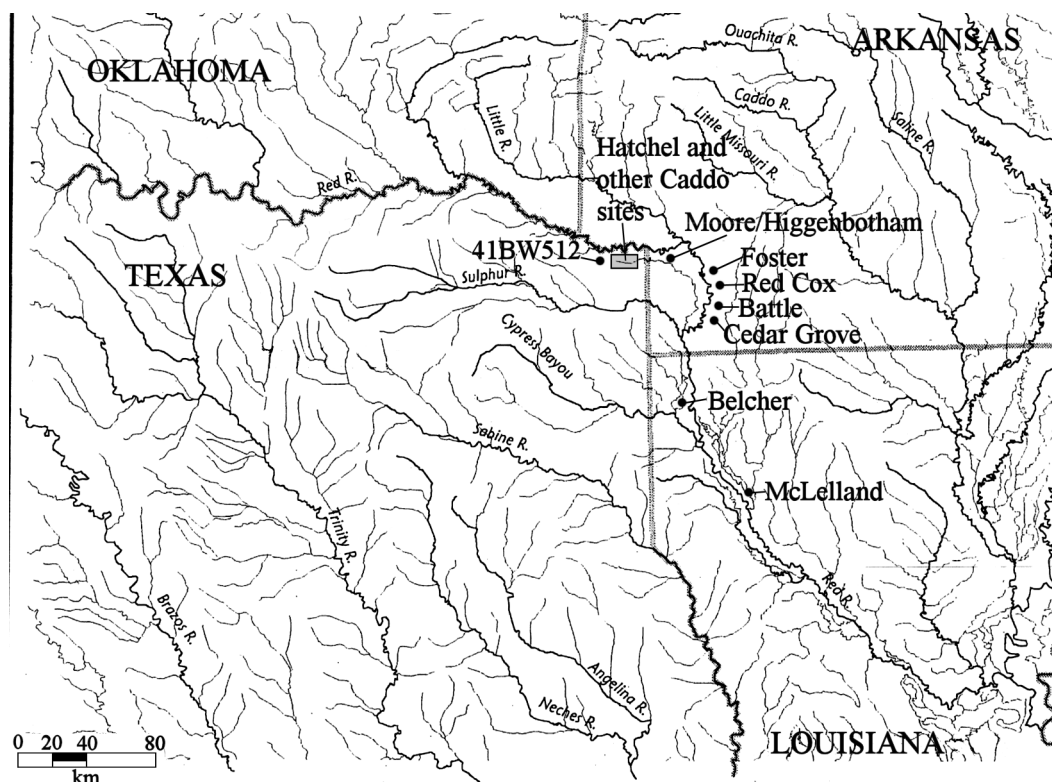


Figure 119. Locations of ancestral Caddo sites in the broader region mentioned in this section of the text.

at the post-A.D. 1700 Chakanina phase component at the Cedar Grove site (3LA97, Schambach and Miller 1984).

There are three Belcher phase components at the Belcher site in northwestern Louisiana (see Figure 119): Belcher II-IV (Webb 1959). Between them, they have more than 16,300 ceramic vessel sherds and 189 vessels. The principal utility wares in these components are Belcher Ridged ($n=5729$ sherds and 22 vessels) and Karnack Brushed-Incised ($n=1373$ sherds and seven vessels), along with lesser amounts of Foster Trailed-Incised, Cowhide Stamped, and Moore Noded. Fine wares are dominated by Belcher Engraved and Hodges Engraved, including 836 sherds and 79 vessels, as well as Glassell Engraved ($n=262$ sherds and 12 vessels) and Taylor Engraved ($n=210$ sherds and eight vessels). There are a few vessels of non-local manufacture in the Belcher site assemblage, including one Bailey Engraved bottle, a Wilder Engraved bottle, and a Ripley Engraved vessel made by Titus phase potters (see Figure 118) living not that far to the west, and a single Simms Engraved vessel; Simms Engraved is one of the principal fine ware types made by Texarkana phase potters.

The large late Belcher to Chakanina phase component ceramic sherd assemblage ($n=6186$) from the McLelland site on Red River is estimated to date from A.D. 1650-1710 (Kelley 1997). More than 58 percent of the sherds and 37.5 percent of the vessels ($n=8$) are shell-tempered or grog-shell-tempered. The vessels include two plain bowls, Cracker Road Incised and Ebarb Incised jars, and Hodges Engraved, Keno Trailed, *var. McClendon*, Keno Trailed, *var. Glendora*, and Natchitoches Engraved fine ware vessels; the Keno Trailed, *var. Glendora* and Natchitoches Engraved vessels are post-A.D. 1690 fine ware types along the Red River. The vessel sherds ($n=1698$) from identified types at the McLelland site include more than 80 percent from Belcher Ridged, Karnack

Brushed-Incised, and Emory Punctated-Incised vessels, along with sherds from Keno Trailed, Hodges Engraved or Natchitoches Engraved, and Natchitoches Engraved vessels.

Belcher phase village deposits at the Battle site have primarily grog-tempered vessel sherds (86 percent) dominated by Karnack Brushed-Incised and Foster Trailed-Incised vessels, as well as lesser numbers of sherds from Pease Brushed-Incised and Belcher Ridged vessels (McKinnon 2013, 2017). Fine ware sherds from Belcher Engraved, Glassell Engraved, and Keno Trailed vessels comprise less than 10 percent of the decorated sherds in the village assemblage. The same range of Belcher phase utility ware and fine ware sherds are present in the platform mound excavations, as well as sherds from Cowhide Stamped, Moore Noded, and Taylor Engraved, along with calibrated radiocarbon dates of A.D. 1445-1545 and A.D. 1450-1640 (McKinnon 2013, 2017).

The two Belcher phase components at the Foster site (3LA27) on Red River have calibrated radiocarbon dates that range from A.D. 1420-1500, A.D. 1440-1520, A.D. 1450-1640, and A.D. 1630-1670 (Buchner et al. 2012:Table 11-03). Buchner et al. (2012) specifically associate a Belcher Engraved, *var. Ozan* vessel with the 15th century age ranges, and a Keno Trailed bottle and an Avery Engraved, *var. Graves* bowl with the 17th century age ranges. In the sherd assemblage (n=1097) from the Foster site, more than 95 percent of the sherds are from grog or grog-bone-tempered vessels; only 4.7 percent of the sherds are from shell-tempered vessels. Among the decorated utility ware sherds are sherds from Karnack Brushed-Incised, Foster Trailed-Incised, Pease Brushed-Incised, Cowhide Stamped, Moore Noded, and Belcher Ridged vessels. Fine ware sherds in the assemblage are from Keno Trailed, Avery Engraved, and Belcher Engraved. Red-slipped sherds comprise only 1.7 percent of the decorated sherds in the assemblage (n=359) and 11.8 percent of the fine ware sherds (n=51).

In the case of the Belcher phase component at the Red Cox site (3LA18), dated by radiocarbon to A.D. 1450-1640 (calibrated, 2 sigma), the ceramic vessel sherds are primarily from grog, grog-bone, and bone-tempered vessels (58 percent), but shell-tempered (7 percent) and grog-shell-tempered (35 percent) vessel sherds are abundant (McKinnon et al. 2017). Identified fine ware vessel sherds are from Belcher Engraved, Glassell Engraved, and Hodges Engraved vessels, and the utility wares include sherds from Foster Trailed-Incised, Pease Brushed-Incised or Karnack Brushed-Incised, and Belcher Ridged vessels. At the Moore/Higginbotham site (3MI3/30) on Red River, with one radiocarbon date of A.D. 1400-1440 (calibrated, 2 sigma), all of the ceramic vessel sherds (n=168) are from grog or grog-tempered vessels (Kelley and Guccione 2000). Fine wares represent about 61 percent of the decorated sherds, and include Glassell Engraved, Keno Trailed, Simms Engraved, unidentified engraved, and one red-slipped sherd; these sherds suggest a post-A.D. 1550 Belcher phase component at the site. Utility wares are from incised, tool punctated, and brushed vessels, as well as from McKinney Plain and Foster Trailed-Incised jars.

At the Cedar Grove site, there are two ancestral Caddo components, one dating from ca. A.D. 1650-1680 (late Belcher phase) and the other from ca. A.D. 1680-1730 (Chakanina phase). The vessels in the earlier Belcher phase component (n=23) include Foster Trailed-Incised, *var. Foster* and *var. Dobson* and Karnack Brushed-Incised, *var. Karnack* utility wares, and Belcher Engraved, *var. Belcher* and *var. Ogden*, Keno Trailed, *var. McClendon*, Hodges Engraved, *var. Armour* and *var. Candler*, Avery Engraved, *var. Graves*, and Glassell Engraved, *var. McGee* vessels. The later Chakanina phase vessel assemblage (n=44) at the Cedar Grove site has Karnack Brushed-Incised, Avery Engraved, Belcher Ridged, and Cabaness Engraved vessels, as well as Foster Trailed-Incised, *var. Dixon*, *var. Moore*, *var. Finley*, and *var. Shaw*, Belcher Engraved, *var. Owen*, Natchitoches

Engraved, Hodges Engraved, *var. Kelley's Lake*, *var. Armour*, and *var. Candler*, and Keno Trailed, *var. Phillips* and *var. Scott's Lake* (Schambach and Miller 1984).

The sherd assemblage from the Cedar Grove site is predominantly from shell-tempered vessels, including 86 percent of the utility wares, including sherds with trailed lines (94 percent), incised decorative elements (92 percent), and brushed marks (74 percent). Common utility wares include sherds from Foster Trailed-Incised, Belcher Ridged, and Karnack Brushed-Incised vessels, and the best represented fine wares are sherds from Natchitoches Engraved, Belcher Engraved, Hodges Engraved, and Hodges-Natchitoches vessels (Schambach and Miller 1984).

There certainly are clear stylistic associations in the utility wares and fine ware vessels and sherds in contemporaneous Texarkana and Belcher phase sites, as a number of defined ceramic types occur in components from both phases, but they clearly represent different ceramic traditions. This is particularly the case for utility wares such as Karnack Brushed-Incised, Foster Trailed-Incised, and Belcher Ridged in ceramic components of both phases; Belcher Ridged vessels and sherds are much more abundant in Belcher phase components, however. Much of the utility ware in a number of the Belcher phase sites are shell-tempered, but shell-tempered vessels and sherds are far from abundant in Texarkana phase sites until after ca. A.D. 1690; instead, grog-tempered vessels were principally being manufactured throughout the ca. 290 years of the Texarkana phase along the Red and Sulphur rivers in East Texas, and the shell-tempered vessels that are present were manufactured by either Belcher phase or McCurtain phase potters living downstream or upstream from the Nasoni Caddo community at the Hatchel site and local environs.

The fine wares in the two phases are distinctive. The principal fine wares in the Belcher phase include Belcher Engraved, Hodges Engraved, Glassell Engraved, and Keno Trailed, with the later introduction of Natchitoches Engraved vessels in the late 17th century A.D. (Kelley 2012:419). In Texarkana phase sites, the fine wares principally include Barkman Engraved, Simms Engraved, and Hatchel Engraved, with lesser amounts of Bowie Engraved; Belcher Engraved, Hodges Engraved, and Keno Trailed vessels and sherds are significant imports into Texarkana phase ceramic assemblages throughout the occupation of the Hatchel site. Natchitoches Engraved vessels and sherds are absent from the ca. A.D. 1450/1500-1691 platform mound assemblage at Hatchel, but are present in later Nasoni Caddo ceramic assemblages at the Eli Moores (41BW2), Roseborough Lake (41BW5), and Indian Springs #2 (41BW512) sites.

In addition to differences in the stylistic character of the engraved fine wares in contemporaneous Texarkana and Belcher phase ceramic assemblages, the common occurrence of non-engraved red-slipped vessels (whether grog- or shell-tempered) in the Texarkana phase components at the Hatchel site is notable (i.e., 13.3 percent of the fine ware sherds in the assemblage), especially in the virtual absence of red-slipped vessels or vessel sherds in Belcher phase sites. At the Hatchel site, red-slipped vessels (likely bowls and bottles) were apparently made locally (grog-tempered vessels) as well as obtained in trade or exchange with upstream McCurtain phase potters that produced shell-tempered red-slipped vessels defined as Clement Redware (see Flynn 1976). Red-slipped vessels are present throughout the Hatchel platform mound zones, but are most abundant in the early to mid-17th century deposits in Zones B and C (see Table 57).

Ceramic Pipes and Pipe Sherds

Ceramic pipe sherds are relatively common in the various platform mound zones at the Hatchel site. These pipe sherds are from several different forms of pipes, including elbow pipes, tubular pipes, platform pipes, and sherds from long-stemmed Red River pipes (see Hoffman 1967).

Elbow Pipes

The elbow pipes from the Hatchel platform mound are present only in the lower part of the platform mound, namely zones G-I (Table 64), and 50 percent of the elbow pipes occur in Zone H. The elbow pipes are made exclusively with grog temper.

Table 63. Elbow pipes in the platform mound at the Hatchel site.

Zone	Sherd	Temper	Description
G	rim	grog	5.4 mm thick; flat lip
Below G	complete	grog	exterior stem diameter, 23.6 mm; hole diameter, 11.7 mm; bowl height, 20.1 mm; bowl orifice diameter, 42.2 mm; flanged platform on the stem and below the bowl, 9 mm in width
H	stem and base of bowl attachment	grog	stem diameter, 24.0 mm; hole diameter, 4.5 mm
H	complete	grog	stem diameter, 23.2 mm; hole diameter, 8.2 mm; 53.0 mm, length; bowl height, 25.0 mm; exterior burnished
H	complete, missing lip	grog	stem diameter, 23.9 mm; hole diameter, 5.9 mm; length, 54.0 mm; bowl height, 29.0 mm; bowl orifice diameter, 51.0 mm
I	stem and bowl	grog	stem diameter, 20.5 mm; hole diameter, 11.6 mm; basal bowl diameter, 10.5 mm; flat lip; two rows of vertical engraved hatching at base of bowl

These pipes have flat lips, large bowls, and hole diameters that range from 4.5-11.7 mm, with a rounded stem-body juncture (Figure 120a-b, d-e). One of the elbow pipes has a flanged platform on the stem and below the bowl (Figure 120b), while another has an engraved decorative band at the base of the bowl (Figure 120e); the band consists of two horizontal bands filled with short vertical engraved lines.

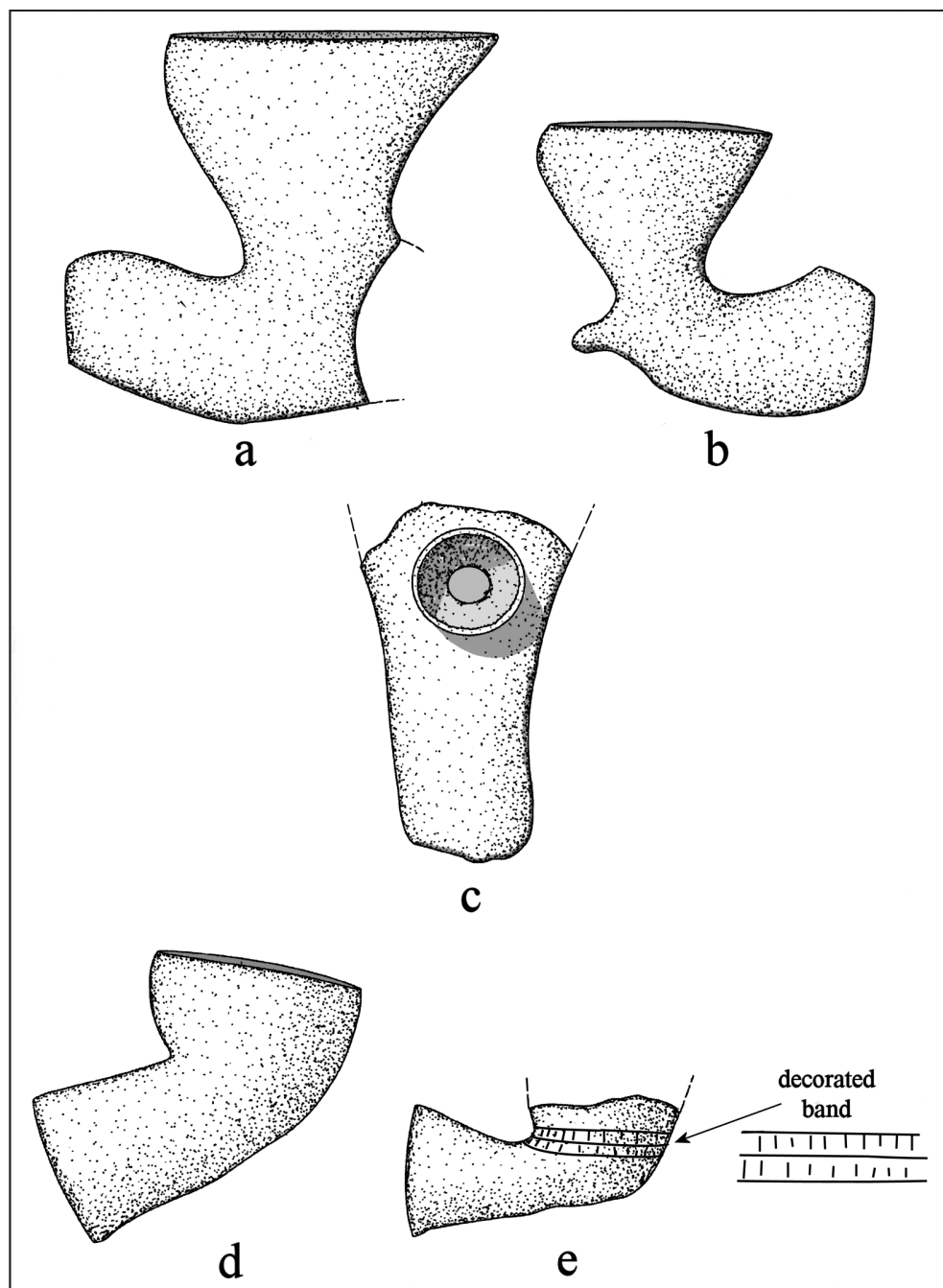


Figure 120. Ceramic pipes in the Hatchel site platform mound zones: a-b, d, Zone H; c, Zone G; e, Zone I.

Tubular and Platform Pipes

Five ceramic sherds are from either thick tubular (n=4) or platform pipes (n=1); they are tempered with grog or grog-bone. The tubular pipes are present in zones C, D, G, and I, while the platform pipe sherd is in Zone G (Table 64; see Figure 120c).

The tubular pipes have thick and wide stems with hole diameters that range from 2.1-12.0 mm (see Table 64). In one case, Zone D, Feature 11, the stem has two additional smaller (3.2-3.7 mm in

Table 64. Tubular and platform pipes in the platform mound at the Hatchel site.

Zone	Sherd	Temper	Description
C, Fea. 7	stem and base of bowl attachment	grog	stem ext. diameter, 19.9 mm; hole diameter 5.6 mm; bowl basal diameter, 31.2 mm+
D, Fea. 11	stem/lip	grog	stem ext. diameter, 26.7 mm; hole diameter, 12.0 mm, at lip
G	platform	grog-bone	Platform and base of pipe bowl; 19.0 mm bowl diameter; platform diameter, 21.2 mm
G	stem and base of bowl attachment	grog	stem ext. diameter, 18.5 mm; hole diameter, 2.1 mm; bowl diameter, 23.1 mm
I	stem/lip	grog	stem diameter, 23.0 mm; hole diameter, 7.6 mm

diameter) visible stem holes. Bowl diameters are large on the tubular pipes, ranging from 23.1 mm to at least 31.2 mm.

The platform pipe sherd is from a cylindrical-shaped platform pipe with a centrally-placed pipe bowl; the base of the pipe bowl remains on the specimen (see Figure 120c). The base of the pipe bowl is 19.0 mm in diameter, while the stem opening at one end has a hole diameter of 13.0 mm; the stem diameter is 21.2 mm. The platform pipe is broken on one side of the bowl, but the remaining fragment is at least 32.8 mm in length. Webb (1959:177 and Figure 139d) recovered a grooved-punctated platform pipe from Middle Caddo period Haley phase contexts at the Belcher site, and a plain platform pipe came from Haley phase contexts at the Haley site in southwestern Arkansas.

Long-Stemmed Red River Pipes

The 34 long-stemmed sherds are from ceramic pipes with long stems and generally small bowls placed near the end of the stem, at least on pipes dating after ca. A.D. 1000 (see Hoffman 1967). The sherds from these pipes are found from Zone C near the top of the platform mound to Zone K, the habitation area underneath the primary platform (Table 65). The highest proportion of long-stemmed pipe sherds are in Zone I (n=7, 20.6 percent) and Zone K (n=7, 20.6 percent), and it is suspected that the pipe sherds originated in Zone K habitation deposits under the mound, and these deposits were used for mound fill during the construction of the platform mound, thus incorporating long-stemmed pipe sherds from earlier deposits dating after ca. A.D. 1000-1200 into later post-A.D. 1450 mound zones.

The long-stemmed pipe sherds are from pipes made with either grog (67.6 percent), grog-bone (20.6 percent), or bone (11.8 percent) temper (see Table 65). These pipes have stem diameters that range from 7.3-21.1 mm, and fall into two groups: 7.0-9.9 mm and 10.0-21.1 mm. These stem

Table 65. Long-Stemmed Red River pipe sherds in the Hatchel site platform mound excavations.

Zone	Sherd Type (mm)	Temper (mm)	Ext. Diameter	Hole Diameter
C, Fea. 7	stem	grog	10.5	3.7
C, Fea. 8	stem	bone	7.1	2.1
C, Fea. 8	stem	grog	8.0	3.5
D	stem	bone	9.3	2.4
F, Fea. 15	stem	bone	7.6	2.5
F	stem	grog-bone	8.8	3.1
F	lateral stem and bowl base	grog	12.7	5.0
G, Fea. 22	stem	grog	13.2	5.6
G, Fea. 22	stem	bone	12.8	5.6
G	stem	grog	8.4	3.8
G	stem	grog-bone	10.0	4.3
G	stem	grog	7.9	3.3
G	stem	grog	8.8	3.9
G	stem, flat butt end	grog-bone	10.2	2.9
H	stem	grog	11.1	3.1
H	stem	grog	7.9	3.4
H*	stem/bowl	grog-bone	9.5	3.9
H, Fea. 18	stem	grog	12.0	6.0
H, under Fea. 19-20	stem	grog	7.7	3.1
Above I	stem	grog	9.7	4.0
I	stem, flat butt end	grog-bone	7.3	2.1
I	stem	grog	10.3	4.8
I	stem	grog	9.4	3.0
I	stem	grog	16.0	6.6
I	stem	grog-bone	15.2	5.4
I	stem	grog	21.1	7.9
I	stem	grog	8.7	-
K	stem	grog	10.3	2.7
K	stem	grog	8.8	2.5
K	stem	grog	9.7	4.1

Table 65. Long-Stemmed Red River pipe sherds in the Hatchel site platform mound excavations, cont.

Zone	Sherd Type (mm)	Temper (mm)	Ext. Diameter	Hole Diameter
K	stem	grog	10.1	4.3
K, ash deposit	stem	grog-bone	9.0	4.3
K, ash deposit	stem	grog	7.6	3.2
K, ash deposit	stem	grog	9.7	4.3

*bowl diameter, 22.0 mm and bowl height, 19.5 mm

diameters are consistent with the *var. Graves Chapel* and *var. Haley* long-stemmed pipes, respectively, defined by Hoffman (1967:9-10). One of the Zone F pipes has a rounded butt end, indicative of a *var. Haley* pipe (see Hoffman 1967:Figure 5a-c). The stem with a flat butt end in Zone G is likely from a *var. Graves Chapel* pipe (see Hoffman 1967:Figure 4a-b). Both long-stemmed pipe forms date after ca. A.D. 1200, particularly the *var. Haley* form, as this pipe variety is clearly associated with Haley phase components in the Great Bend area of the Red River basin.

Spindle Whorls and Ceramic Disks

Ceramic spindle whorls and ceramic disks are present in the ancestral Caddo ceramic assemblage from the platform mound at the Hatchel site. Both kinds of ceramic artifacts have been deliberately shaped from either body or base sherds from previously broken ceramic vessels; several of the spindle whorls and disks have visible decorative elements from those broken vessels. Spindle whorls represent evidence of textile manufacture/weaving by the Caddo peoples living at the site, while the function of the ceramic disks is not known, but perhaps they were employed to hold powders.

The 26 circular-shaped spindle whorls are distributed in zones A (n=2), B (n=4), E (n=1), F (n=3), G (n=6), H (n=4), below H (n=2), and above I (n=3), and two others are from excavation levels that cannot be assigned to a specific zone in the platform mound (Table 66). About 92 percent of the spindle whorls are from grog-tempered vessels; the other 8 percent are from shell-tempered vessels in Zone H. They are made from both body (58 percent) and base (42 percent) sherds; thicker sherds were preferred for spindle whorl use.

The complete spindle whorls range from 58.0-118.0 mm in diameter, and have drilled holes that range from 7.2-20.0 mm in diameter. These size differences indicate that spindles of different sizes were employed by the ancestral Caddo peoples living at the Hatchel site to manufacture textiles and cloth.

There are 11 ceramic disks in the platform mound ceramic assemblage. They are found in zones A (n=1), under A (n=1), C (n=1), E (n=1), G (n=2), H (n=3), above I (n=1), and in an unassigned zone (n=1) (Table 67). These disks were shaped into a rectangular form from ceramic vessel body and base sherds, and the disks range in diameter from 28.0-122.0 mm. About 55 percent of the disks are made from base sherds, while the remainder are made from body sherds.

Four of the ceramic disks have deliberately-formed circular depressed areas on the surface of the vessel sherds (Figure 121a-b) (see Table 67). These depressions range from 19-49 mm in diameter, and the sherds with the larger depressed areas are present in zones near the top of the platform mound. These depressions may have held something, possibly powders, tobacco, or other organic mixtures.

Daub and Burned Clay

There are only a few pieces of daub found in the collections from the Hatchel platform mound. This includes pieces, respectively, from Zone D (n=1); Zone H (n=2); Feature 19-20 in Zone H (n=1); under Features 19-20 in Zone H (n=1); below Zone H (n=2); and level 1, layer 4 (no known zone association, n=1). It is clear that the WPA personnel did not collect daub with any consistency, especially since it was noted that large concentrations of daub were noted in Zones A and C (Beatty 1939).

There are also a few pieces of burned clay in the collection from the Hatchel mound. These small pieces were found in Zone A (n=5), Feature 4 in Zone B (n=1), Zone B (n=6), Zone C (n=5), and Zone H (n=4).

Summary and Conclusions

The Hatchel site (41BW3) is a major ancestral Caddo village and mound center on a natural levee deposit in the floodplain of the Red River in Bowie County, Texas, just a few kilometers

Table 66. Spindle whorls from the Hatchel site platform mound excavations.

Zone	Sherd Type	Temper	Diameter (mm)	Hole Diameter (mm)
A+	base	grog	N/A	10.0
A, Fea. 1	base	grog	N/A	8.1
B, Fea. 5	body	grog	88.0	14.9
B, Fea. 6	base	grog	N/A	20.0
B, Fea. 6	body	grog	N/A	9.0+
B, Fea. 6**	body	grog	92.0	7.2
E	base	grog	N/A	8.2+
F	body	grog	N/A	13.2
F	body	grog	N/A	8.0+
F	base	grog	88.0	18.1
G	body	grog	118.0	17.0
G	base	grog	N/A	16.0+
G***	body	grog	N/A	9.0+
G	body	grog	N/A	13.0
G	body	grog	N/A	7.3+
G, Fea. 22	body	grog	N/A	10.4
H	base	shell	N/A	8.9+
H	base	shell	N/A	8.2+
H, Fea. 19-20	body	grog	N/A	10.8+
Below H	body	grog	N/A	9.0
Below H	body	grog	N/A	8.2+
Above I	body	grog	N/A	10.8
Above I	base	grog	96.0	10.4
Above I*	body	grog	N/A	17.0+
lv. 1, layer 1	base	grog	58.0	18.3
lv. 1, layer 2	base	grog	75.0	10.5

*with parallel trailed lines

**with vertical applied ridge el.

***with straight applied ridge el.

+exterior red-slipped

Table 67. Ceramic disks in the platform mound excavations at the Hatchel site.

Zone	Sherd Type (mm)	Temper	Diameter	Description
A, Fea. 1	base	grog	86.0	-
Under A	body	grog	-	38 mm depression formed on surface
C, Fea. 7	body	grog	50.0	ext. red-slipped and straight engraved line on the disk
E	body-base	grog	-	49 mm depression on surface; square-bowl; base outlined by horizontal trailed lines (Keno Trailed)
G	base	grog	111.0	-
G*	body	grog-bone	-	19 mm depression on surface
H, Fea. 18	base	grog	-	-
H, Fea. 19-20	base	grog-bone	122.0	-
H, Fea. 19-20	body	grog	28.0	-
Above I	body	grog	-	depression formed before vessel firing; 26.0 mm diameter
lv. 1, layer 3	base	grog	77.0	-

*diagonal opposed trailed lines (Keno Trailed)

west of the Arkansas state line. The platform mound and the main part of the associated village overlooks two channel lakes of the river; these likely were part of the channel of the river when the site was occupied by the Caddo. The site was occupied by the Caddo from at least A.D. 1040 to the late 17th century. The earliest end of this age range is based on 2-sigma calibrated ages from radiocarbon dates obtained in one of the site's village areas south of the platform mound, as well as a few diagnostic ceramic sherds from Early Caddo period (ca. A.D. 900-1200) types, and the latest temporal estimate is based primarily on the association of the Hatchel platform mound with a mound and *templo* illustrated on a 1691 map drawn of the site during the Teran expedition (Figures 122 and 123a-b), and selected decorated sherds and vessels in the uppermost mound zones; there are calibrated radiocarbon dates that extend to A.D. 1660 from other village areas or compounds. The platform mound stood at least 7.6 m in height at the time of the Works Progress Administration (WPA) investigations in 1938-1939.

The primary purpose of this study of the ceramic vessels, ceramic vessel sherds, ceramic pipes, and other clay artifacts from the WPA platform mound excavations at the Hatchel site has been to

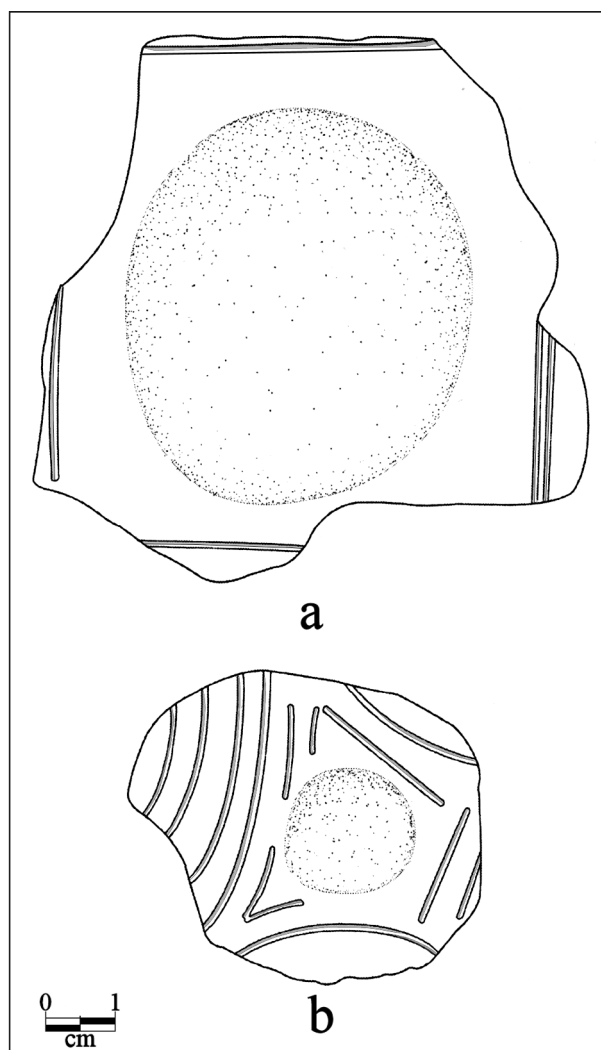


Figure 121. Ceramic disks with circular depressed areas: a, Zone E; b, Zone G.

better understand the character of the ceramic artifacts from ancestral Caddo contexts at the site—including the use of different tempers, and the nature of the plain ware, utility ware, and fine ware found there, as well as other clay artifacts, particularly pipes. This analysis is primarily focused on identifying the character of the ceramic tradition in place at the Hatchel site and its platform mound, temporal changes in the manufacture and use of these ceramic artifacts, as well as attributes specific to those artifacts (i.e., the use of pigments, or the use of long-stemmed versus elbow pipes and platform pipes) from sub-mound deposits (Zone K), the first primary platform mound (Zone I and J), and the series of temple mound structures in Zones A-H, the second primary platform mound. The characteristics recognized in the ceramic vessels, vessel sections, and ceramic vessel sherds at the Hatchel mound are also compared to and contrasted with other contemporaneous Red River basin ceramic assemblages, particularly Texarkana and Belcher phase assemblages from sites near to Hatchel, as well as along the Red River in southwestern Arkansas and northwestern Louisiana.

The platform mound at the Hatchel site was constructed in several stages, and there are ceramic vessel sherds, vessel sections, and/or vessels associated with every zone in the platform mound. The first, or principal, platform comprises zones I and J—built atop the level ground surface (Zone K) and a large pre-mound circular structure (Feature 25)—and these two platform zones stood 4.2 m in

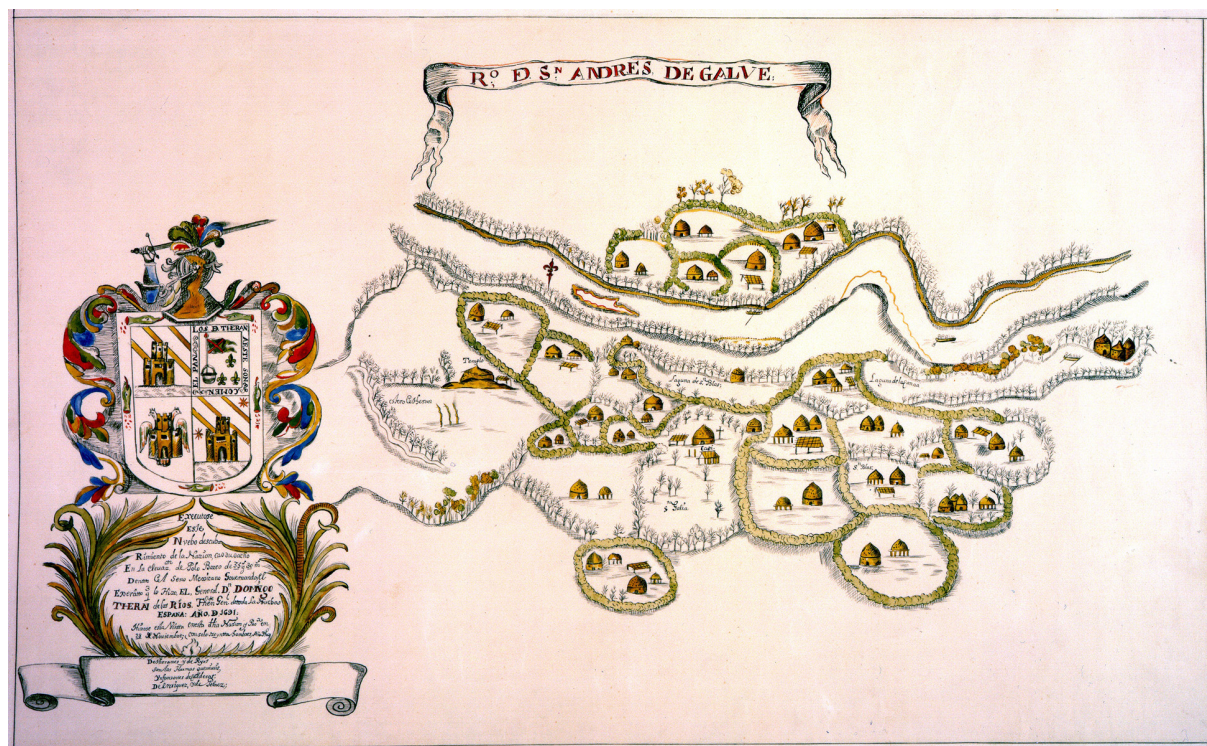


Figure 122. The 1691 Don Domingo Teran de los Rios map of the Nasonai Caddo community on the Red River, believed to be the Hatchel site and neighboring recorded Caddo sites.



a



b

Figure 123. Features of the 1691 Teran map: a, templo; b, village compound.

height, with flat tops. Neither of these mound platform zones apparently had structures constructed atop them. Zone J was comprised of red and blue clays and was about 22 m in length and 14 m in width, thus rectangular, stood 2.2 m in height, and had steep sides. It contained little in the way of cultural materials. Zone I, on the other hand, was built up from sandy loam deposits, and contained an abundance of debris, especially ceramic sherds.

Subsequently, a second stage of the mound began to be constructed on the northern half of the primary mound platform. This stage is comprised of eight stratified zones (A-H) with structures and other features. Each zone was subsequently buried by sandy loam and/or clay mound fill deposits. In a number of cases, the structures in different mound zones were built exactly atop or directly above those from a lower zone; the zones were generally 1 ft. apart. Zone A, the last zone and the zone most likely temporally related to the mound and *templo* shown on the Teran map, was capped with about 1 ft. of brown sandy loam and habitation debris.

The ceramic assemblage from the Hatchel site platform mound at the Texas Archeological Research Laboratory discussed in this volume includes 18 vessels, 59 partially complete vessel sections, 15,041 ceramic vessel sherds, 45 sherds from elbow, tubular, platform, and long-stemmed pipes, 26 spindle whorls, and 11 ceramic disks. There are also a few pieces of daub and burned clay in the assemblage.

The ceramic sherd assemblage includes 9818 plain rim, body, and base sherds, 2507 utility ware rim and body sherds, and 2718 fine ware rim and body sherds. Overall, the highest densities of sherds in the mound zones are in Zones G and H, the initial mound zones above the primary platform. Approximately 50 percent of the sherds from the Hatchel mound excavations are from these two zones. About 89 percent of the sherds in the Hatchel mound excavations are from vessels tempered only with grog (i.e., crushed sherds). Another 5.2 percent are from vessels tempered with grog and crushed and burned bone; only 1.0 percent of the vessel sherds are tempered with burned bone. Ceramic sherds from vessels tempered with burned and crushed mussel shell comprise only 4.5 percent of the sherd assemblage. There is very little difference in the use of tempers in the plain ware, utility ware, and fine ware vessel sherds in the platform mound deposits. Grog temper is present in between 87.0-90.3 percent of the sherds in the three wares.

The decorated ceramic vessel sherds in and under the Hatchel platform mound can be segregated into four different groups based on zone stratigraphy, implied temporal differences, and different proportions of specific kinds of utility ware and fine ware sherds in each zone:

- Group I, Zones A-D, ca. A.D. 1600-1691
- Group II, Zones E-F, ca. A.D. 1550-1600
- Group III, Zones G-J and Above Zone K, ca. A.D. 1500-1550, with the rapid construction of the primary platform (zones I-J) at or about A.D. 1500
- Group IV, Zone K and Below Zone K, pre-A.D. 1200

Groups I-III represent Late Caddo period Texarkana ceramic assemblages, and Group IV is part of an Early Caddo period use of the Hatchel site before the eventual establishment of Texarkana phase village areas by ca. A.D. 1450 and the ca. A.D. 1500 construction of the platform mound over the Zone K archaeological deposits. This Early Caddo assemblage is separated in time by ca. 300 years from the beginning of construction and use of the primary platform mound in Zones I and J,

but nevertheless the primary platform mound was constructed directly atop important ritually used structures in Zone K.

The utility ware rim and body sherds from the Hatchel mound excavations include sherds from vessels with a wide variety of decorative methods and combinations of decorative elements, as well as different tempers. Sherds from vessels with incised decorations are the most common in the Texarkana phase utility wares (20.1 percent), followed by brushed sherds (19.0 percent) from Karnack Brushed-Incised vessels, sherds with applied elements (13.8 percent), and trailed sherds from Foster Trailed-Incised vessels (7.4 percent). The highest proportion of sherds with brushed-punctated, incised, tool punctated, trailed (Foster Trailed-Incised), and trailed-incised (Foster Trailed-Incised) decorative methods occur in Zones A-D at the top of the second platform mound. Sherds with applied-tool punctated and brushed-incised-punctated decorative methods are also present in Zones A-D. A single Cowhide Stamped jar is present in Zones A-D.

In Zones E and/or F, the highest proportion of sherds with brushed and brushed-incised decorative elements occur. This is also the case with sherds with roughened (McKinney Plain), trailed-applied, and trailed-brushed decorative methods. Sherds with applied-fingernail punctated, applied-tool punctated, neck banded-incised (Nash Neck Banded), roughened-incised, and stamped (Cowhide Stamped) decorative methods are also present in these zones. Utility ware vessels and vessel sections recovered in features in Zones E and F include Foster Trailed-Incised, *var. unspecified*, two Foster Trailed-Incised, *var. Foster* jars, a Foster Trailed-Incised, *var. Red Lake* jar, and a Karnack Brushed-Incised jar.

Sherds with the following utility ware decorative methods are most common in zones G-J: applied, applied-incised, brushed, incised, incised-punctated, neck banded, fingernail punctated, ridged (Belcher Ridged, *var. Belcher*), ridged-brushed (Belcher Ridged, *var. Byram's Ferry*), and roughened-applied (McKinney Plain, *nee McKinney Applied*). These same zones also have sherds with applied-fingernail punctated, applied-tool punctated, applied-punctated-incised, brushed-applied, brushed-applied-incised, brushed-applied-punctated, neck banded-applied, neck banded-applied-incised, neck banded-brushed-applied, neck banded-incised, cane punctated, circular punctated, a sherd with both fingernail and tool punctations, ridged-incised, roughened-brushed, and trailed-punctated decorative elements. Utility ware vessels and vessel sections in zones G-J include three McKinney Plain or Applied jars, Foster Trailed-Incised, *var. Foster*, Foster Trailed-Incised, *var. unspecified*, and a Moore Noded bowl.

Zone K utility wares are dominated by incised sherds from Crockett Curvilinear Incised vessels. This includes one Crockett Curvilinear Incised carinated bowl from Feature 25 in Zone K.

The fine wares are dominated by sherds from vessels with engraved decorative methods, as they account for 66.3 percent of the fine ware assemblage, followed by red-slipped vessel sherds (13.3 percent), and engraved-punctated sherds (12.1 percent) from Barkman Engraved, Belcher Engraved, and Simms Engraved vessels. Engraved-incised sherds from Hudson Engraved vessels are most common in zones A and B at the top of the second platform mound. Fine ware vessels and vessel sections in Zones A-D include a Hodges Engraved, *var. Candler* bottle, a Hodges Engraved, *var. unspecified* bowl, a Simms Engraved carinated bowl, a Belcher Engraved carinated bowl, and a shell-tempered Avery Engraved jar. The sherds from engraved-red-slipped vessels are most common in zones E-F, while the engraved-trailed sherds are present only in Zone B (a duck head effigy

sherd) and Zone Below H. Fine ware vessels in Zone E and F include a Keno Trailed jar; a Barkman Engraved carinated bowl, three Simms Engraved carinated bowls, a Hatchel Engraved vessel, and an Avery Engraved, *var. Bradshaw* compound bowl.

Sherds from engraved vessels, engraved-appliqued vessel sherds (Hatchel Engraved), and the single engraved-brushed sherd are best represented in zones G, H, and Below H near the base of the second primary platform mound. Sherds with engraved-punctated decorative methods are most abundant in Zones E, G, and I, while the engraved-punctated-appliqued sherds from Belcher Engraved vessels occur only in zones G and H. The one painted sherd, possibly from a eastern Arkansas Nodena Red and White or Avenue Polychrome vessel, is in Zone H. Fine ware vessels and vessel sections in zones G to Above Zone I include five Barkman Engraved carinated bowls, four Avery Engraved compound bowls (one shell-tempered), including one *var. Bradshaw* vessel in Zone H, a Belcher Engraved, *var. Belcher* carinated bowl, two Simms Engraved carinated bowls, and a Bowie Engraved carinated bowl.

Red-slipped rim and body sherds, including sherds from grog-tempered Simms Slipped vessels, are best represented in Zones B and C, while Keno Trailed vessel sherds are most abundant in Zones C and D. A red-slipped appliqued sherd from a Hatchel Engraved vessel is in Zone H, while two Keno Trailed sherds with punctated zones were recovered in Zones B and H.

Only a few of the decorated sherds in the assemblage are from shell-tempered vessels, and the highest proportion of shell-tempered sherds have appliqued-punctated, engraved-red-slipped, red-slipped, tool punctated, neck banded, and fingernail punctated decorative elements. These decorative methods in the shell-tempered wares are most common or occur in zones E-J, with the exception of red-slipped Clement Redware sherds in zones B-C, tool punctated sherds (Emory Punctated-Incised) in zone A, Foster Trailed-Incised sherds in zones A-D, and Keno Trailed vessel sherds in zones C-D. Most of the shell-tempered sherds are from utility ware and fine ware vessels made by McCurtain phase potters, and are not locally made, including Avery Engraved, Clement Redware, McKinney Appliqued, Nash Neck Banded, and Emory Punctated-Incised. The shell-tempered sherds and vessels in the ceramic assemblage at the Hatchel site were made by Caddo potters in other parts of the Red River basin and traded/exchanged with the Nasoni Caddo community at the Hatchel site over a period of ca. 200 years.

In summary, then, the earliest Caddo component in the platform mound excavations at the Hatchel site is in Zone K, and is best represented by Crockett Curvilinear Incised sherds and one vessel, as well as *var. Graves Chapel* and *var. Haley* long-stemmed Red River pipes. The settlement responsible for the Zone K structures and the ceramic assemblage is estimated to date between ca. A.D. 1040-1200, and it was buried about 300 years later during the Texarkana phase by the construction of the primary platform mound (Zones I-J) and the first two of the platform mound zones with structures constructed and used on Zones G and H.

Zones G-J (dating ca. A.D. 1500-1550) are characterized by Bassett arrow points, elbow pipes and a platform pipe, a bulbous arrow point form, and a range of fine ware and utility ware vessels and vessel sections. Specific to these zones are vessels of Avery Engraved, *var. Bradshaw*, Bowie Engraved, an appliqued bowl, and a Moore Noded bowl. Other ceramic types that first appear in zones G-J, but are also made and used in later zones, include Simms Engraved, Belcher Engraved, Foster Trailed-Incised, McKinney Plain, and Barkman Engraved.

In Zones E-F (dating ca. A.D. 1550-1600), triangular Maud arrow points began to be manufactured and used by the Nasoni Caddo at the Hatchel site, and continued in use (in Zones A-D) until the mound was no longer used after ca. A.D. 1691. The ceramic vessels and vessel sections specific to Zones E-F are Hatchel Engraved, Keno Trailed, and Foster Trailed-Incised, while Simms Engraved, Avery Engraved, and Barkman Engraved are shared primarily with the Zone G-J ceramic assemblages.

Zones A-D are the latest structural zones in the Hatchel mound, and they have their own distinctive sets of arrow point (Maud), tubular pipes and ceramic types in the vessels and vessel sections. The ceramic types in these zones include Cowhide Stamped and Hodges Engraved in Zones A and B, Avery Engraved from Zone D, and Belcher Engraved and Simms Engraved in Zones B and C, respectively.

None of the recovered ceramics in Zone A, the latest of the mound zones, are specifically from identified Historic Caddo Red River ceramic types such Natchitoches Engraved, several varieties of Foster Trailed-Incised, Keno Trailed, and Hodges Engraved, or Cabaness Engraved that date from ca. A.D. 1690-1730 (see Schambach and Miller 1984:168 and Table 11-12). This strongly suggests that although the platform mound at the Hatchel site was apparently occupied in 1691 during the time of the Teran expedition to the site, it was abandoned very shortly thereafter, as was much of the community; post-A.D. 1690 Caddo ceramic assemblages in this locale have been identified only at the nearby Eli Moores site (41BW2), as well as at the Roseborough Lake site (41BW5) and the Indian Springs #2 site (41BW512). It is also possible that the structure shown on the Teran map of the platform mound, apparently “partly buried within the mound” (Sabo 2012:435), may have actually already been abandoned sometime prior to 1691, and was in the process of collapse, thus its appearance that it was partly buried in the mound.

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Appendix 1, Field Specimen Numbers, Provenience, and Associations

On Researchgate: D.O.I:10.13140/RG.2.2.32528.30724

Appendix 2, Ceramic Sherd Descriptions by Zone and/or Feature

On Researchgate: D.O.I:10.13140/RG.2.2.32528.30724

Appendix 3,

**Megascopic Attribute and Ceramic Petrographic Analysis
of a Painted Sherd from the Hatchel Mound (41BW3),
Northeast Texas**

David Glen Robinson

Introduction

A painted sherd, catalogued as #1296, Phase H, was unearthed in the 1938-1939 WPA excavations of the Hatchel Mound (41BW3), Bowie County, in Northeast Texas (Perttula 2014). Detailed analysis of the ceramics took place in the twenty-first century at the Texas Archeological Research Laboratory in Austin, Texas, where the artifacts and all materials of the site are curated. The specimen was one piece of a lot (#1296) of ceramics from Zone H collected during the large-scale excavation of the mound. The piece came to the notice of Timothy K. Perttula during his analysis of the ceramic sherds from the mound excavations, which is discussed in this report.

The small specimen measures 24 x 23 mm, making typological assessment very difficult. Painted sherds of any type are exceedingly rare in Caddo archeology, however, and the sherd may derive from one of a few painted types known from eastern North America, including the Arkansas River basin in Arkansas, the lower Mississippi valley, and Moundville. The sherd appears to be negative painted white/red, is from a well-made vessel, and when the sherd was part of a whole vessel it was doubtlessly a high value item transported to the Hatchel site at the time of the site's occupation. Zone H in the mound is estimated to date to the early 16th century A.D.

Megascopic analysis

The megascopic analysis was conducted with a binocular stereoscopic microscope with magnification up to 10X. Color readings with Munsell color charts were taken in shaded daylight.

In a view of the sherd in cross section, the specimen appears to have three layers of differing colors (Figure A3.1). The interior face and core of the sherd were formed by a dark gray (5YR4/0

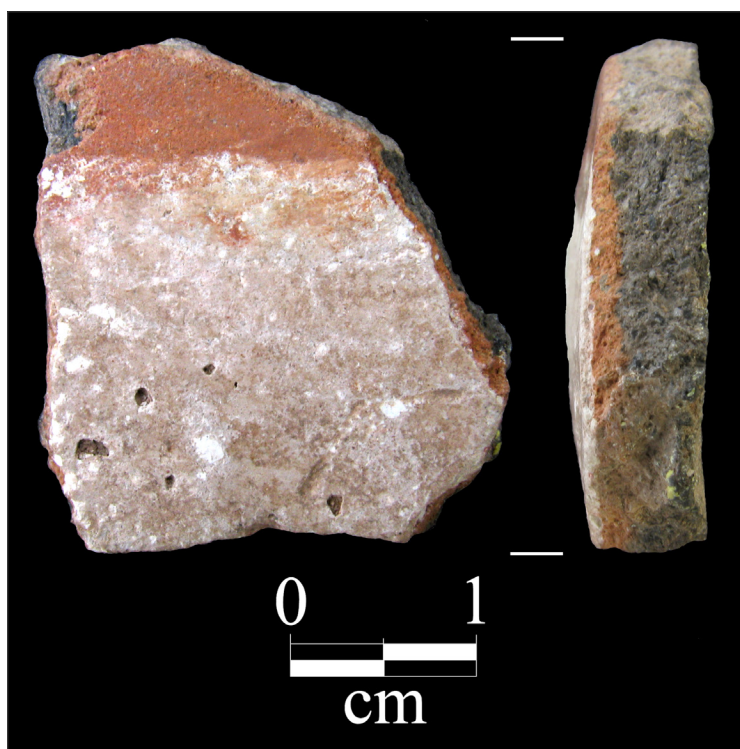


Figure A3.1. Photograph showing sherd with paste layers visible in profile view.

dark gray and 5YR5/0 gray) paste 3-4 mm thick. A red (5YR5/4 reddish-brown) clay paste overlies the darker paste on the exterior side. This red layer varies from 0.6-1.0 mm in thickness. The third layer is a chalky white (5YR 8/2 pinkish-white and 5YR8/3 pink) paint applied partially over the red layer. The uncovered exterior surface, where the pinkish-white or pink paint leaves the underlying red layer exposed, may have formed part of a red figure or pattern as part of a design in negative, with the pinkish-white paint outlining or bordering the red to create its shape in plan view on the vessel exterior. Lacking any more of the original vessel, this interpretation is speculative. At the least, the two colors on the sherd formed a polychrome, or more precisely a bichrome, vessel.

Terming the paste materials layers may be something of a misnomer as there is a color transition between the gray layer and the reddish-brown layer, and there is no distinct boundary between them. The differences may be due to greater reduction of the interior gray masses and greater oxidation of the exterior reddish paste masses during firing. Deliberate interior reduction, or smudging, was a widespread practice in many prehistoric ceramic-making cultures. The intent was to give vessel interiors black or dark gray colors. The pinkish-white paint layer lies conformably on the reddish-brown ceramic paste, but it is clearly a different material than the reddish-brown paste.

The gray paste is only roughly finished on the interior surface of the sherd, not smoothed or burnished. Where the red layer is exposed on the exterior surface, it is smoothed. The pinkish-white paint was laid over some areas of the red layer, and the areas covered by it are a maximum of 0.6 mm thick. From the thickest points, the pinkish-white layer tapers to a very thin edge on the red layer. In plan view, the line formed by the paint edge is remarkably straight and distinct. The surface of the white paint has been smoothed, apparently at the same time as the red layer, because minor bits of red material show on the white surface, near the white/red boundary. These bits may have been dragged over the boundary in the smoothing process.

The paste texture of the gray paste is moderately rough, and comprised of angular clay masses and tempering particles. The clay material forms masses up to 0.5 mm in size. The red paste is similar, but with an almost homogeneous texture near the exterior face. Tempering is primarily angular and rounded quartz particles in both pastes. The material is poorly sorted, ranging from very fine sand and fine sand up to at least one granule-sized grain of quartz or some other silicate rock. Fine silt particles are also common, observed only as points of light in the gray and red clay matrixes. Other minerals are present as well. Bright red particles and smears of red were observed in the red layer, and a few such particles were observed in the gray layer. These may be hematite particles added to the red paste layer as a colorant and also as a tempering agent. Given the blocky, angular texture of the gray layer, grog temper was expected in the sherd, but none was observed, nor was shell temper.

The white paint has a smooth, almost shiny texture and a straight, vertical breakage face. The material appears unitary at 10X, with occasional poorly mixed particles of the same chalky material within it. These undissolved particles are ovoid, up to 1 mm in maximum dimension.

The compact nature of the ceramic matrix is the most relevant observation. The three different color masses have differing materials to a minor extent, but they lay together in well-bonded fashion—in transition as suggested above—with no cracks between them and no flaking or spalling of the white paint. Differing ceramic materials have variable coefficients of expansion and contraction in firing, which may make them tend to break apart, spall, or crack when fired. The negative painted sherd here has no apparent issues of firing as would be expected of pottery with diverse material.

Instead, the whole vessel of which this sherd was a part was well-designed and formed by a skilled potter who was knowledgeable and confident in her or his materials.

Petrographic Analysis

The petrographic analysis applied the near-standard method of point counting 200 bodies or species in a thin section of the sherd (Chayes 1949; Shepard 1942, 1976). Point counting gives an accurate picture of the proportions of all the rocks, minerals, and voids in the section, and baseline information about the ceramic matrix of the vessel. The microscope work was conducted on an Olympus OH2 stereographic petrographic microscope at the Texas Archeological Research Laboratory at The University of Texas at Austin. The observed optical properties of the sherd are presented in Table A3.1.

Table A3.1. Optical properties of the Hatchel Mound painted sherd (TKP1050).

Color ppl*	medium reddish-brown
Color xpl*	black
Isotropy	isotropic
Matrix	20
Voids	25.5

*ppl = plane-polarized light; xpl = cross-polarized light
numbers are proportions of a 200 point count.

The ceramic matrix has a mixed or jumbled look rather than a uniform, unitary, appearance. The appearance is created by angled and curved silt patterns and void patterns oriented in different directions relative to the exterior and interior edges. Adding to the look are minor, rounded, sand masses in fine sand sizes and micaceous, yellowish, clay balls. The section in general has relatively small particle sizes. These paste patterns are continuous through the gray and reddish-brown paste zones. The color transition from the dark to the lighter reddish paste is smooth, and the transition lacks any abrupt changes or breaks that would indicate joints or layering of different pastes (Figure A3.2).

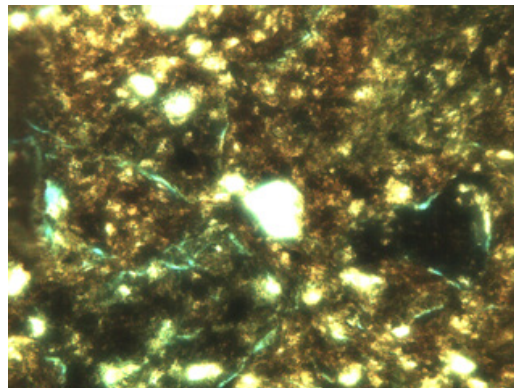


Figure A3.2. Microphotograph showing gray to red paste transition from the bottom to the upper left.

In contrast, the pinkish-white paint layer appears to lie on the reddish-brown layer in rounded masses (Figure A3.3). The exterior surface has been smoothed, as described above. A few clay paste and aplastic inclusions appear to have been mixed into the paint layer from the reddish paste. In plane-polarized light, the paint layer appears greenish-gray. The material of the paint has a fine granular appearance of material in medium and fine silt sizes, although the particles are smaller than can be clearly discerned at 100X. Occasional larger particles that can be seen at 100X include an arcuate piece in a fine sand size and at least three circular fine sand-sized items that have calcitic optical traits. These larger items give the strong suggestion that the paint is ground aquatic mussel shell, either as a pure finely ground material or mixed with extremely fine clay to form a slurry for use as a paint (Figure A3.4). The aplastic particles observed and counted in the point count are listed in Table A3.2.

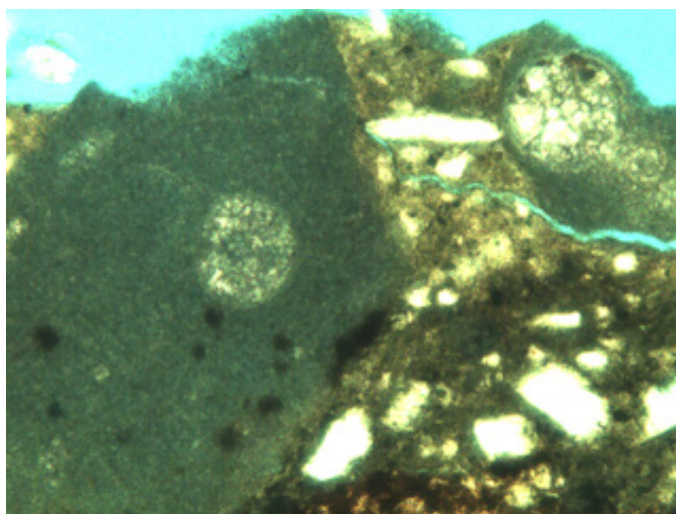


Figure A3.3. Microphotograph showing paint masses lying on reddish paste layer in ppl. Note circular calcitic masses, a dim arcuate piece in the upper left of a large gray-green mass, and medium silt-sized particles of hematite in the lower portion.

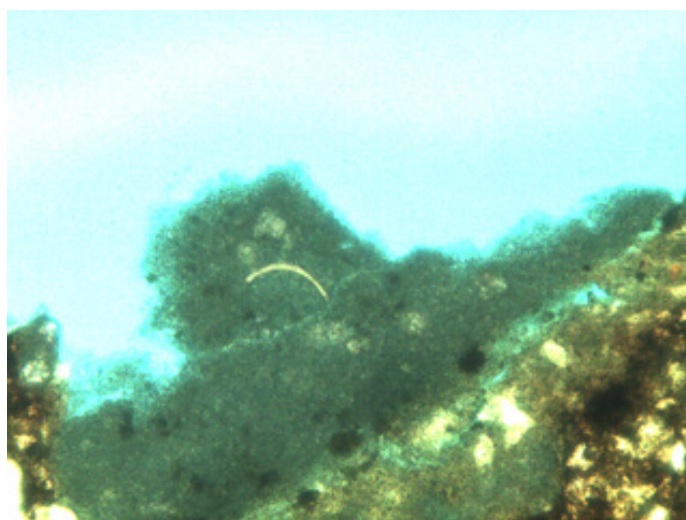


Figure A3.4. Microphotograph of paint with an arcuate shell piece and additional dim shell and hematite particles in ppl.

Table A3.2. Aplastic inclusions and additional materials as proportions of a 200-point count.

Quartz silt	33.5, rounded
Common quartz	1.0
Chert	0.5
Ferrous hematite	11*
Magnetite	1.5*
Ilmenite	3
Muscovite	1
Bone	0.5
Aquatic shell	1
Woody burnout voids	1
Invertebrate Egg cases	0.5

*temper

The aplastics indicate that hematite, inclusive of the companion mineral magnetite, is the tempering agent of the original vessel. Hematite in the thin section ranges in size from coarse silt to coarse sand, but magnetite was observed only in coarse sand sizes (Figure A3.5). Ilmenite, titanium oxide, is often found in and near iron deposits, but not in economically exploitable amounts in Northeast Texas.

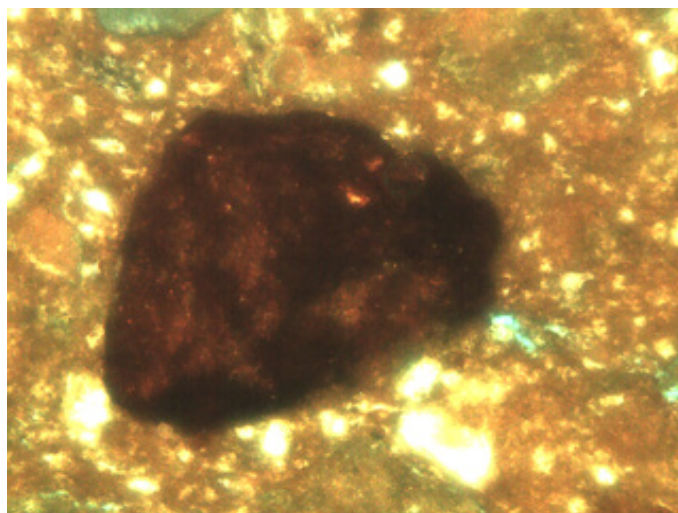


Figure A3.5. Microphotograph of magnetite in reflected light view. Note differing interior color areas and a few metallic specks

The paste is very silty, containing much rounded quartz silt. Other minor silicates include common quartz and chert, in medium sand and fine sand sizes, respectively.

Muscovite mica is a significant telltale mineral in Northeast Texas Caddo pottery because of its hit-or-miss quality (Robinson et al. 2012). Some regions and geological formations have mica in

abundance, while others lack it (Sellards et al. 1932:531-546). Micas including muscovite, biotite, and chlorite are usually found as sprinklings of silt and fine sand-sized particles in elongated spicule and rod-like shapes. The small, almost trace, amount of muscovite in the sherd allows little in the way of interpretation beyond the fact of its presence.

The remaining aplastic inclusions in the sherd are all organic forms. One particle of medium sand-sized bone was an incidental inclusion in the sherd, certainly not tempering. The same may be said for two pieces of fine sand-sized aquatic mussel shell. Two voids with rims of burned-out carbonaceous material (“woody burnout”) were counted. Finally, a cluster of invertebrate egg cases was identified in a large void. The eggs were likely laid in a void and carbonized during firing. The species of the egg layer is unidentifiable.

Results and Distributional Analysis

The bichrome sherd from the Hatchel Mound site (41BW3) has an iron-rich paste further enriched by hematite tempering and additional tempering by the companion iron mineral magnetite. The original vessel showed skilled firing by heightening and maintaining an oxidizing atmosphere on the exterior of the vessel while controlling a reduction atmosphere to effect darker colors on the vessel interior. The exterior atmosphere gained the red and white colors of the decorative design. The pinkish-white paint was ground shell or a mixture of shell and clay that adhered well to the underlying ceramic layer.

The ceramic matrix, with its abundant iron, is found in several Northeast Texas areas that have iron-bearing formations and local outcrops. Wares with actual hematite temper are less common, and omnibus distribution studies have not yet been completed. The Hatchel sherd is, however, similar to the hematite-tempered Paste Group K at the nearby Eli Moores site (41BW2), two and one-quarter miles east of Hatchel Mound (Perttula 2015; Robinson and Perttula 2015:67, 72-73). Paste Group K there is comprised of three sherds. In addition to hematite temper they share with the Hatchel painted sherd a low diversity of aplastic inclusions and abundant silts. Unlike the Hatchel sherd, the silts in the Paste Group K sherds are angular and sub-angular particles, not rounded as in the Hatchel site specimen, and this is the key difference between them. Bone, shell, or grog tempers are not present in all the examined sherds. Muscovite is similarly minimal, save for one identified specimen in one Paste Group K sherd and in the bichrome sherd from the Hatchel mound, as mentioned. Voids show semi-parallel alignment at best; otherwise they remain unoriented. The Hatchel painted sherd is closely similar to the Paste Group K sherds, but it is not identical to them.

The local geology provides a comparative base for looking at the potential clay and temper sources for the Hatchel sherd and Paste Group K at the Eli Moores site, if the painted vessel was made from clays in this part of the Red River basin. The Hatchel site lies on Quaternary fluvial terrace gravels, the lowest terrace above the Red River floodplain. The Eli Moores site lies on alluvial deposits of the floodplain itself (Flawn 1979). The deposits of both these units in the series of the Red River terrace system are described generally, without reference to specific mineralogies. They are clays, silts, sands, and gravels deposited in alluvial structures for significant distances around the sites (Flawn 1979). Thin sections of sediments collected from Red River alluvium several miles upriver by the author show no hematite forms in petrographic optical scans. Sediment samples much nearer the sites would be desirable, but such are not yet available.

The non-alluvial deposits nearest to the Hatchel site belong to the Paleocene Midway Group, locally undivided, bearing clays, silts, sands, marls, and lentils of rosette limestone outcropping slightly more than two miles south of the site. Hematite and iron-bearing outcrops are lacking in the descriptions of the group, as is any mention of mica (Flawn 1979; Sellards et al. 1932:531-546). The Hatchel site sherd contains iron compounds absent locally but common in ceramics and natural formations elsewhere in Northeast Texas. This situation exists in other local wares (Paste Group K at the Roseborough Lake Site [41BW5]; Robinson and Perttula 2015:67, 72-73).

A more precise location of a possible source area for the ceramic in Northeast Texas may not be currently conclusive. Wider distributional studies to identify similar types are useful in providing context regarding the manufacture of the vessel sherd, but they are also inconclusive. Phillips' (1970) study of the Lower Mississippi valley described 14 painted types and varieties, almost all with combinations of red and white paints, slips, or films. Nodena Red and White and its four varieties bear similarities to the Hatchel sherd in the treatment of the painted surface: "Polishing over the painting produces a certain amount of blurring of the edges and sometimes even transfers particles of one pigment onto the field occupied by the other" (Phillips 1970:142). This is similar to the Hatchel sherd. Almost all the types and varieties of Nodena Red and White and many ceramics in the Lower Mississippi Valley are shell-tempered, a factor that limits comparability with the Hatchel sherd, which lacks shell temper.

Steponaitis (1983) studied the ceramics of Moundville in northern Alabama. He also reported temper types and clay sources locally and regionally. The common red clay sources had abundant quartz, muscovite, feldspar, and hematite. There were occurrences also of maghemite, an iron oxide companion mineral of hematite (Steponaitis 1983:19). Vessels with painted decoration were indexed by the method and colors of the painting. Of the 21 vessels so indexed, 10 were painted with red and white paints (Steponaitis 1983:350-351). The composition of white paints was not fully discussed, however, Steponaitis (1983:26-27) suggested that white paint was composed merely of white-firing, iron-deficient clay, and red paint was clay enriched by ground hematite. As in the Lower Mississippi Valley, temper in Moundville ceramics was largely shell. Grog temper was found in minor proportions, and always with shell temper, never by itself (Steponaitis 1983:20-21).

This brief survey of two large-scale studies of Southeastern ceramics did not find exact matches to the composition and technology of the Hatchel Mound bichrome sherd. The initial distributional look at areas outside Northeast Texas establishes only that the sherd belongs to a rare high-craft or artisan level ceramic type, but the location of other members of that type has not been found.

The unusual painted decorative pattern, however, is unlike any engraved or incised decorative design for which Caddo area ceramics are known. The quality of the materials and artisan level production of the vessel are such that the ceramic vessel cannot be considered a fluke of manufacturing. The source location of the type of painted vessel is not currently known, but it appears not to be local to the Hatchel site in Northeast Texas. The interpretation offered here is that it is an artifact of a trade network for fine wares, possibly interregional in scope. Further research into localities of production and technology may prove rewarding.

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Appendix 4,

**Caddo Ceramic Sherds Collected in 1931 by A. T. Jackson
at the Hatchel Site (41BW3)**

Timothy K. Perttula

During a 1931 trip to the Hatchel site, A. T. Jackson of The University of Texas collected a few ceramic vessel sherds from the site; their provenience within the site is not known. Jackson collected 11 grog-tempered decorated body sherds, five from utility wares and six from fine wares. These sherds are from the Late Caddo period occupation of the site, based on decorative elements present on the sherds.


Three of the utility ware sherds in the 1931 collection have parallel brushing marks, and are likely from Karnack Brushed-Incised jars. The other utility ware sherds have either cross-hatched incised lines or rows of small appliqued nodes (Moore Noded). One of the fine ware sherds has a curvilinear engraved zone filled with cross-hatched lines, and may be from a Hodges Engraved vessel. The other five fine ware sherds are from Keno Trailed vessels. They have either multiple curvilinear trailed lines (n=4) or sets of opposed trailed lines.

Appendix 5,

Recent Radiocarbon Dates from the Hatchel Site (41BW3)

Timothy K. Perttula

Two samples of unburned deer bone from two of the zones in the Hatchel site (41BW3) platform mound were radiocarbon-dated by Direct AMS in November 2016. D-AMS 018708 is from Mound Zone E, while D-AMS 018709 is from Zone G:



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Samples submitted for radiocarbon dating have been processed and measured by AMS. The following results were obtained:

DirectAMS code	Submitter ID	Sample type	Fraction of modern		Radiocarbon age	
			pMC	1 σ error	BP	1 σ error
D-AMS 018708	AEC-111	bone	95.33	0.65	384	55
D-AMS 018709	AEC-112	bone	97.22	0.39	226	32

Results are presented in units of percent modern carbon (pMC) and the uncalibrated radiocarbon age before present (BP). All results have been corrected for isotopic fractionation with an unreported $\delta^{13}\text{C}$ value measured on the prepared carbon by the accelerator. The pMC reported requires no further correction for fractionation.

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IntCal13 calibrations, at 2 sigma, of the two dates, range from A.D. 1429-1645 for the Zone E date and A.D. 1641-1681 for the Zone G date. Although the ages of the two dates are flipped (i.e., Zone G is older than Zone E), both calibrated dates fall within the expected temporal range of the construction of the mound, between ca. A.D. 1450-1691. The median calibrated age of the Zone E date is A.D. 1537, while the median calibrated age of the Zone G date is A.D. 1661.

Appendix 6,
Plants from the
Hatchel Mound (41BW3),
Bowie County, Texas

Leslie L. Bush

Macrobotanical Analysis, Manchaca, Texas

Introduction

Twenty-four dendrochronology samples and five ethnobotany samples from the Hatchel site (41BW3) were submitted for identification of plant material. The Hatchel site is a Caddo mound center located on the floodplain of the Red River. Along with the Mitchell (41BW4) and Eli Moores (41BW2) sites, it is part of an extensive settlement believed by Mildred Mott Wedel and others to be the village depicted in the map based on Domingo Teran de los Ríos's 1691-1692 expedition to the area (Perttula 2014:2).

All samples reported here were taken from the main Hatchel Mound, a platform mound excavated by Works Progress Administration personnel in 1938-1939 (Perttula 2014:7). Multiple mound surfaces, referred to as "floors", "zones," or "phases" were identified during the investigations, and the term "zones" are used in current analyses. The ground surface beneath the platform mound is designated Zone K while Zones I and J comprise the first, primary mound platform. Zones A-H are a series of superimposed surfaces constructed on the northern half of the primary mound platform (Perttula 2014:12-13). One to three structures were present on each surface along with pit features, post holes, and other deposits (Perttula 2014:14). A Zone K structure dates primarily to the Early Caddo period, ca. A.D. 1100-1200. The upper zones (A-H) are primarily from the period A.D. 1500-1690, during the Late Caddo Texarkana phase (Perttula 2014:14).

Ecological setting

The Hatchel site lies in the meander belt of the Red River, a vegetation zone situated along the northeastern border of the state that is not well documented in Texas (but see Hoagland [1998] and Hoagland et al. [1996] for related work in Oklahoma). The comprehensive *Flora of East Texas* devotes only three pages to Red River vegetation (Diggs et al. 2006), and many state-wide descriptions of Texas flora omit the area altogether. The Red River vegetation zone is particularly narrow in Bowie County, since most of the floodplain is currently on the left (north) side of the river in that area and therefore belongs to the state of Oklahoma. Not surprisingly, plants of riparian zones tend to tolerate flooding and other disturbances better than their upland counterparts. A great many species may share the canopy in a floodplain forest, and "dominance is absent or poorly defined" (Lee 1945:163). Common trees of the Red River area include various types of oaks (*Quercus* spp.; post, water, Shumard, chinkapin, bur), eastern red cedar (*Juniperus virginiana*), pecan and other hickories (*Carya* spp.), elms (*Ulmus* spp.), white ash (*Fraxinus americana*), rough leaf dogwood (*Cornus drummondii*), blackhaw viburnum (*Viburnum prunifolium*), sedges, and grasses and forbs (Bezanson 2000:57). Floodplains also support American beautyberry (*Callicarpa americana*), possumhaw (*Ilex decidua*), and Virginia creeper (*Parthenocissus quinquefolia*). Oxbows, sloughs, marshes and other wetlands associated with the Red River offer plant resources such as river cane, cattail, and aquatic tubers or rhizomes including American lotus (*Nelumbo lutea*), waterlily (*Nymphaea* spp.), and spatterdock (*Nuphar lutea*).

Mean annual precipitation in Bowie County during the period 1951-1980 was 45.3 inches (1151 mm). Precipitation is distributed fairly evenly over the year, with a slight peak in late spring. The frost-free season in Bowie County today averages 235 days and runs from March 21 through November 11 (NFIC 1987:57-58).

Methods

Dendrochronology samples were initially examined to confirm that each was consistent with fragments from a single wood specimen. From each sample, one or more fragments with the largest radial dimensions (that is, potentially the largest number of rings) were selected for identification. The transverse section of the largest of those specimens was cleaned with a brush and the number of rings counted to arrive at a minimum number of rings available for dendrochronological analysis. The number of rings counted is the minimum present both because other fragments may have more but narrower rings and because brushing does not result in as clean a section as the more destructive technique of breaking the wood. After identification and ring counting, the entire sample was weighed, labeled, and returned to the original container. When more than one bag of material was present for a single sample, material from each container was identified and bagged separately.

Each ethnobotany specimen was size-sorted through a stack of graduated geologic mesh to facilitate sorting. All botanical remains were removed from materials that did not pass through the No. 10 mesh (2 mm). These were completely sorted, counted, weighed, recorded, and labeled. Weights were measured with an Ohaus Scout II 200 x 0.01 g electronic balance. Material that passed through the 2 mm mesh was examined under a stereoscopic microscope at 7-45 X magnification for botanical remains not previously identified in the larger size fraction. Identifiable material was counted, weighed, recorded, and labeled. The remaining examined material that fell through the 2 mm mesh was added to the non-botanical material larger than 2 mm and weighed and bagged as “residue.” Ethnobotany Specimen #4, by far the largest specimen, was not completely analyzed. It consisted of two vials of whole or nearly-whole sweetgum fruits, three bags labeled “sorted from matrix,” and a single block of matrix in which wood charcoal and sweetgum fruits are visible. One bag of the material that had been removed from matrix was examined by methods used for the other ethnobotany samples. Because material from that bag was consistent with the material visible in the matrix block, it was decided to leave the interior of the block intact to retain suitability for additional future studies that might be compromised by exposure (e.g., pollen, phytoliths, radiocarbon dating).

Wood identification was attempted for 20 randomly-selected specimens larger than 2 mm from each ethnobotany sample, or for all wood fragments when 20 or fewer were present. Wood charcoal fragments were snapped to reveal a transverse section and examined under a stereoscopic microscope at 28-180 X magnification. When necessary, tangential or radial sections were examined for ray seriation, presence of spiral thickenings, types and sizes of inter-vessel pitting, and other minute characteristics that can only be seen at the higher magnifications of this range.

Botanical remains were identified to the lowest possible taxonomic level by comparison with material in the Macrobotanical Analysis reference collection and standard reference works (Core et al. 1979; Davis 1993; Hoadley 1990; InsideWood 2004; Martin and Barkley 2000; Musil 1963; Panshin and de Zeeuw 1980; Wheeler 2011). Botanical nomenclature follows that of the PLANTS Database (USDA, NRCS 2017).

Results

Table A6.1 shows identifications of plant remains, all wood, from the Hatchel Site dendrochronology samples. Plant identifications from ethnobotany samples are shown in Table A6.2. Context information derived from bag labels and the Texas Archeological Research Laboratory (TARL) inventory sheet is given in Table A6.3.

Table A6.1. Dendrochronology samples from the Hatchel site.

Sample #	State/Type	Plant part	Botanical name	Common name	Number	Weight (g)	Approx. min. rings	Comments
DS1	Carbonized	Wood	<i>Fraxinus</i> sp.	Ash	1	21.78	9	bark removed
DS2	Carbonized	Wood	<i>Fraxinus</i> sp.	Ash	1	21.75	10	
DS3	Carbonized	Wood	<i>Maclura pomifera</i>	Bois d'arc	1	110.42	16	
DS3	Carbonized	Wood	<i>Maclura pomifera</i>	Bois d'arc	1	237.86	11	no bark
DS4	Carbonized	Wood	<i>Maclura pomifera</i>	Bois d'arc	1	36.35	10	some parts dark brown (semi-carb)
DS5	Uncarbonized	Wood	<i>Juniperus virginiana</i>	Eastern redcedar	1	151.69	6	
DS6	Carbonized	Wood	<i>Maclura pomifera</i>	Bois d'arc	1	33.68	9	black ceramic sherd (4.69 g)
DS7	Semi-carbonized	Wood	<i>Maclura pomifera</i>	Bois d'arc	1	220.01	19	very dark brown
DS8	Carbonized	Wood	<i>Maclura pomifera</i>	Bois d'arc	1	124.1	17	associated soil (61.41 g)
DS9	Semi-carbonized	Wood	<i>Juniperus virginiana</i>	Eastern redcedar	1	105.91	13	
DS10	Carbonized	Wood	<i>Maclura pomifera</i>	Bois d'arc	1	139.66	24	rays and tyloses
DS11	Carbonized	Wood	<i>Populus deltoides</i>	Cottonwood	1	28.41	6	
DS12	Carbonized	Wood	<i>Quercus</i> sect. <i>Quercus</i>	White group oak	1	126.85	13	
DS13	Carbonized	Wood	<i>Maclura pomifera</i>	Bois d'arc	1	15.92	7	
DS13	Carbonized	Wood	<i>Maclura pomifera</i>	Bois d'arc	1	53.55	23	
DS14	Carbonized	Wood	<i>Maclura pomifera</i>	Bois d'arc	1	82.1	9	not quite fully carb
DS15	Carbonized	Wood	<i>Quercus</i> sect. <i>Quercus</i>	White group oak	1	414	50	earlywood 1 pore wide
DS16	Carbonized	Wood	<i>Maclura pomifera</i>	Bois d'arc	1	84.47	12	
DS16	Carbonized	Wood	<i>Maclura pomifera</i>	Bois d'arc	1	54.09	14	includes refitted center rings
DS17	Carbonized	Wood	<i>Maclura pomifera</i>	Bois d'arc	1	481	11	
DS18	Carbonized	Wood	<i>Maclura pomifera</i>	Bois d'arc	1	123.34	8	bark removed, not quite fully carbonized

Table A6.1. Dendrochronology samples from the Hatchel site, cont.

DS19	Carbonized	Wood	<i>Pinus</i> subg. <i>Pinus</i>	Hard pine group	1	16.44	7	grog-tempered sherd, cream colored (6.10 g)
DS20	Carbonized	Wood	<i>Populus deltoides</i>	Cottonwood	31	54.87	8	id'd from IVP size and rays in tangential section. Rad sects poor and inconclusive. Residue (11.56 g)
DS21	Uncarbonized	Wood	<i>Morus rubra</i>	Red mulberry	1	24.4	30	
DS21	Uncarbonized	Wood	<i>Morus rubra</i>	Red mulberry	1	89.89	32	
DS22	Uncarbonized	Wood	<i>Juniperus virginiana</i>	Eastern redcedar	1	57.72	14	wide rings
DS25	Uncarbonized	Wood	<i>Juniperus virginiana</i>	Eastern redcedar	1	71.41	51	narrow rings
DS25	Uncarbonized	Wood	<i>Juniperus virginiana</i>	Eastern redcedar	1	226.91	45	
DS26	Uncarbonized	Wood	<i>Juniperus virginiana</i>	Eastern redcedar	1	62.16	24	
DS26	Uncarbonized	Wood	<i>Juniperus virginiana</i>	Eastern redcedar	1	134.41	10	
DS26	Uncarbonized	Wood	<i>Juniperus virginiana</i>	Eastern redcedar	1	98.17	14	
DS26	Uncarbonized	Wood	<i>Juniperus virginiana</i>	Eastern redcedar	1	79.28	10	

Table A6.2. Ethnobotanical Samples from the Hatchel site.

Sample #	State/Type	Plant part	Botanical name	Common name	Number	Weight (g)	Comments
EBS1	Carbonized	Wood	<i>Populus deltoides</i>	Cottonwood	73	1.45	id'd from IVP size and rays in tangential section. Radial sections poor and inconclusive
EBS1	Carbonized	Indeterminable			11	0.08	
EBS1	Carbonized	Indeterminable			4	0.03	
EBS1	Carbonized	Wood	<i>Fraxinus</i> sp.	Ash	1	0.01	
EBS1	Carbonized	Wood	<i>Carya</i> sp.	Hickory	1	0.01	
EBS1	Carbonized	Stem	Poaceae	Grass family	514	3.39	2-3.5 mm diameter
EBS1	Carbonized	Stem	Poaceae	Grass family	29	0.44	nodes
EBS1	Carbonized	Rhizome	Poaceae	Grass family	2	0.09	
EBS1	Carbonized	Seed	Poaceae	Grass family	1	0.01	
EBS1	Residue					206.46	non-botanical material > 2 mm and examined residue < 2 mm
EBS2	Carbonized	Wood	<i>Ulmus</i> sp.	Elm	22	0.2	
EBS2	Carbonized	Stem	<i>Arundinaria</i> sp.	Cane	1	0.01	split, cleaned
EBS2	Carbonized	Wood	<i>Quercus</i> sect. <i>Quercus</i>	White group oak	1	0.01	
EBS2	Residue					29.88	non-botanical material > 2 mm and examined residue < 2 mm
EBS3	Carbonized	Wood	<i>Carya</i> sp.	Hickory	9	0.06	
EBS3	Carbonized	Rachis	<i>Zea mays</i>	Corn	14	0.22	whole cupules, measured
EBS3	Carbonized	Rachis	<i>Zea mays</i>	Corn	30	0.1	cupule fragments and glumes
EBS3	Residue					5.04	non-botanical material > 2 mm and examined residue < 2 mm
EBS4	Carbonized	Fruit	<i>Liquidambar styraciflua</i>	Sweetgum	3	2.07	whote
EBS4	Carbonized	Fruit	<i>Liquidambar styraciflua</i>	Sweetgum	3	1.97	whole
EBS4	Carbonized	Fruit	<i>Liquidambar styraciflua</i>	Sweetgum	2893	13.31	fragments from matrix
EBS4	Carbonized	Peduncle	<i>Liquidambar styraciflua</i>	Sweetgum	10	0.03	
EBS4	Carbonized	Stem	Poaceae	Grass family	3	0.02	2 are semi-carb
EBS4	Carbonized	Bark			4	0.16	

Table A6.2. Ethnobotanical Samples from the Hatchel site, cont.

EBS4	Carbonized	Stem	<i>Arundinaria</i> sp.	Cane	3	0.03	split, cleaned	
EBS4	Carbonized	Rachis	Poaceae	Grass family	1	0.01	with glumes	
EBS4	Carbonized	Twigs	Hardwood	Hardwood	2	0.09		
EBS4	Carbonized	Indeterminable			3	0.41	one is sweetgum fruit covered in indeterminable substance	
EBS4	Carbonized	Wood	<i>Ulmus rubra</i>	Slippery elm	6	0.2		
EBS4	Carbonized	Wood	<i>Diospyros virginiana</i>	Eastern persimmon	7	0.17		
EBS4	Carbonized	Wood	<i>Fraxinus</i> sp.	Ash	5	0.17		
EBS4	Carbonized	Wood	<i>Carya</i> sp.	Hickory	1	0.05		
EBS4	Carbonized	Wood	<i>Nyssa</i> sp.	Tupelo/blackgum	1	0.01		
EBS4	Carbonized	Wood	Not examined for species	Not examined for species	678	6.1		
EBS4	Residue					149.77	examined material < 2 mm	
EBS4	Contamination					46.63	material > 2mm: soil, rootlets, uncarb stems	
EBS5	Carbonized	Nutmeat	<i>Quercus</i> sp.	Acorn	9	2.17	6 whole. Diameters (mm): 9.4, 9.8, 9.8, 11.2, 8.4, 8.6	

Table A6.3. Context of Samples.

Sample #	Unit	Northing	Easting	Feature	Portion	Level	Depth	Notes
DS1	75	4.1 N	2.0 W		Zone A	1		Mound
DS2	80R1	0.0 N	2.8 W		Zone A	1	DD 0.9	Mound
DS3	95L2	4.2 N	3.6 W		Zone A		DD 5.9	Mound
DS4	80L4	3.3 N	2.7 W	3	Feature 3, Zone A	1	DD 4.8	Mound
DS5	85L4	0.4 W	0.8 N	1	Feature 1, Zone A	1	DD 4.4	Mound
DS6	85L4	3.2 N	3.6 W	1	Feature 1, Zone A	1	DD 5.0	Mound
DS7	85L3	2.1 N	3.7 W	4	Feature 4, Zone B	1	DD 6.4	
DS8	75L2	1.2 N	2.0 W	4	Feature 4, Zone B	1	DD 5.1	post hole
DS9	90L3	2.2 N	0.3 W	4	Feature 4, Zone B	1	DD 4.6	post hole
DS10	75L2	0.0 N	0.7 W	4	Feature 4, Zone B	1	DD 4.2	post hole
DS11	85	3.5 N	3.8 W	7	Feature 7, Zone C	2	DD 5.9	fire pit
DS12	70	1.7 N	4.0 W	7	Feature 7, Zone C	1	DD 5.0	post hole
DS13	70L3	0.9 N	1.7 W	7	Feature 7, Zone C	1	DD 6.1	post hole
DS14	80R4	0.6 N	4.6 W	7	Feature 7, Zone C	1	DD 4.6	post hole
DS15	70	2.3 N	4.0 W	7	Feature 7, Zone C	1	DD 5.0	post hole
DS16	85L3	0.5 N	2.0 W	7	Feature 7, Zone C	1	DD 5.0	horizontal beam
DS17	80L3	2.2 N	2.4 W	7	Feature 7, Zone C	1	DD 5.3	post hole
DS18	90L5	3.8 N	0.8 W	7	Feature 7, Zone C		DD 5.6	post hole
DS19	75R1	1.4 N	1.1 W	11	Feature 11, Zone D	1		
DS20	95L2	0.7 N	3.7 W	11	Feature 11, Zone D	1	DD 5.6	
DS21	90R2	1.5 N	0.9 W	13	Feature 13, Zone E	2	DD 5.6	
DS22					Zone G floor			
DS25	110R14	4.4 S	3.9 W		below Fea. 19-20, Zone H		DD 14.2	
DS26	85R15	1.9 N	0.2 W		Zone H		Datum 15.6	Mound
EBS1	75L2	1.1	2.7	4	Zone B, layer 4	1	DD 4.2	Mound
EBS2	80L2				Phase G		DD 9.2	Mound, postholes
EBS3	75R4	0.0	3.9		Layer 1, Under Phase H	3	DD 12.7	Mound
EBS4	95R4	2.7 S	0.7 E		Phase H		DD 11.7	Mound, pit on "H" floor
EBS5					Phase K		DD 24.0	Mound

Dendrochronology Samples

Notes on the TARL inventory sheet indicate that the dendrochronology samples had previously been examined by the Laboratory of Tree-Ring Research, University of Arizona. Species identifications by the Laboratory were recorded for gymnosperm woods (“softwoods”), while angiosperms were assigned as “hardwood.” In all cases, identifications reported here coincide with previous identifications by the Laboratory of Tree-Ring Research.

Seven wood taxa were identified in the dendrochronology samples. Bois d’arc (*Maclura pomifera*) is the most common, with 11 samples identified. Only three of the bois d’arc specimens are labeled with associated zones (Zones A and C). Two of the four Feature 7 dendrochronology samples are bois d’arc; the others are cottonwood (*Populus deltoides*) and white group oak (*Quercus* sect. *Quercus*). Although bois d’arc wood is heavy and rot-resistant (Alden 1995:71), bois d’arc trees seem an unlikely source for the long, straight poles necessary to support traditional Caddo grass-covered buildings. Bois d’arc branches have stout thorns, and, left unpruned, tend toward a shrubby, branching structure.

Eastern red cedar (*Juniperus virginiana*) is the second most common wood identified, present in five dendrochronology samples. Three of the five red cedar samples are labeled with associated zones; one is from Zone G and the other two are from Zone H. White group oak, cottonwood, and aah (*Fraxinus* sp.) comprised two dendrochronology samples each. Hard group pine (*Pinus* subg. *Pinus*; no zone noted on label) and mulberry (*Morus rubra*; Zone E) are also represented in the dendrochronology samples.

Ethnobotany Samples

Four of the ethnobotany samples are labeled with zone information that indicate they were taken from relatively deep in the mound. They come from Zone G (EBS #2), Zone H (EBS #s 3 and 4), and Zone K (EBS #5). EBS #1 was not labeled with zone information because it came from a part of the mound (i.e., along its peripheries) where zone associations could not be definitively established by the WPA archeologists. The Zone K sample consisted of a single vial of carbonized acorn nutmeats. Diameters of the six whole nutmeats are given in Table A6.2.

Corn was present in the EBS #3 sample (Zone H). No kernels were present. Only three of 14 whole cupules were still attached to each other, but a more complete cob fragment may have been present at the time of excavation. Cupule dimensions are given in Table A6.4.

Wood in the ethnobotany samples was completely carbonized, consisted of smaller fragments than the dendrochronology samples, and more than one taxon was present in each sample, suggesting fuel wood rather than structural wood. Seven wood taxa are present in the ethnobotany samples: ash, cottonwood, elm (including slippery elm, *Ulmus rubra*), hickory, oak (white group), eastern persimmon (*Diospyros virginiana*), and tupelo or black gum (*Nyssa* sp.).

Split and cleaned cane (*Arundinaria* sp.) fragments were identified in EBS #2 and EBS #4, suggesting remains of a plaited basket or basketry debris. Seeds, seed head parts, and stems of a large-stemmed grass such as switchgrass (*Panicum virgatum*), Indiangrass (*Sorghastrum nutans*), or big bluestem (*Andropogon gerardii*) were found in EBS #1. The thinner outer walls and scarcity of pith make cane and Eastern gamagrass (*Tripsacum dactyloides*) unlikely identifications. Sweetgum

Table A6.4. Corn cupules from Ethnobotany Sample #3, Hatchel site (41BW3).

	Cupule width (mm)	Cupule length (mm)
	6.65	3.3 (mean of conjoined rank)
	6.6	3.3 (mean of conjoined rank)
	6.3	3.3 (mean of conjoined rank)
	5.1	2.5
	5.5	2.9
	4.9	2.0
	5.0	2.5
	5.1	2.2
	5.3	2.2
	5.75	2.7
	4.8	2.1
	4.0	1.7
	3.9	1.6
	4.5	1.8
Mean	5.2	2.2

fruits (*Liquidambar styraciflua*) were present in EBS #4 along with the wood charcoal, cane, and a small amount of bark and grass parts. Pit features with carbonized sweetgum fruits are known from elsewhere in the Caddo area, including the Vanceville Mound site (16BO6) and the Foster Place site (3LA27) (Girard 2012:261; Buchner et al. 2012:222).

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